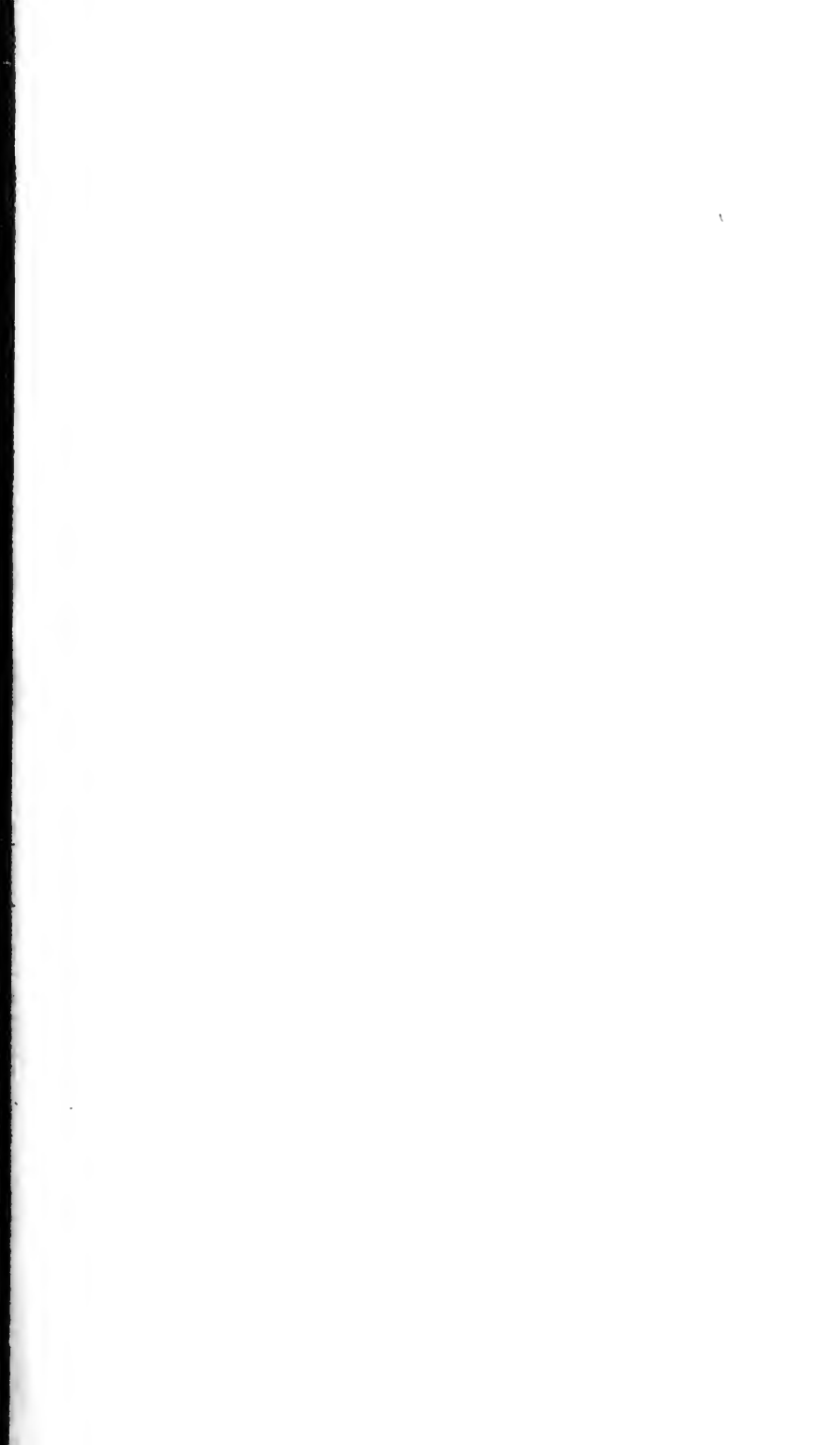


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FOR THE SESSION 1844-45.

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BEING A

Weekly Journal

OF

MEDICINE AND THE COLLATERAL SCIENCES.

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THE
LONDON MEDICAL GAZETTE,

BEING A
WEEKLY JOURNAL

OF
Medicine and the Collateral Sciences.

FRIDAY, OCTOBER 4, 1844.

THE LIFE AND LABOURS OF
DR. WILLIAM HUNTER.

*A Discourse delivered at the Opening of
the Session 1844-45, in the Theatre of
St. George's Hospital.*

By ROBERT LEE, M.D. F.R.S. &c.

GENTLEMEN,—In the early part of the last century, Mr. John Hunter resided with his family, on a small paternal estate called Long Calderwood, in the parish of Killride, Lanarkshire. Five of his children died during infancy, and his eldest son, James, was cut off by consumption, in 1743, at the age of 28, after displaying the most amiable dispositions, and the greatest industry and talent as a student of medicine. There remained after his decease two sons and two daughters, one of whom, William, born on the 23d May, 1718, became the most consummate anatomist, and one of the most distinguished medical philosophers, that Britain has ever produced. He taught anatomy, physiology, and midwifery in London, with unparalleled success, for nearly forty years, established the celebrated school in Great Windmill Street, from which the school of St. George's Hospital emanated, and left to the University of Glasgow at his death in 1783, the largest and most valuable anatomical and pathological museum that had ever been formed. His younger brother, John, was born in 1728, and he became the greatest comparative anatomist and surgeon that ever lived. He was elected surgeon to St. George's Hospital in 1768, and died in 1793, near the spot where we are now assembled. The sister of William and John Hunter, Dorothea, was the mother of Dr. Mathew Baillie, physician to St. George's Hospital, and many years the first physician in London, whose Treatise on Morbid Anatomy has long been considered as one of the most valuable contributions to medical science, and was the first

work of the kind published in any country. In a letter from Sir Walter Scott to Miss Joanna Baillie, Dr. Baillie's sister, who has attained the most elevated rank in literature, the following eulogium is pronounced on his character:—"We have, indeed, to mourn such a man, as since medicine was first esteemed an useful and honoured science, has rarely occurred to grace its annals, and who will be lamented, so long as any one lives who has experienced the advantage of his professional skill, and the affectionate kindness by which it was accompanied."

An eminent writer has observed, that there were giants living on the earth at the time when John Hunter appeared,—Albinus, Haller, Monro, Camper, Cullen, Cheselden, Pott, and the members of the French Academy of Surgery. Though poor and friendless, and wholly destitute of patronage, William and John Hunter entered boldly and successfully into competition with this formidable host of scientific men, and by the unassisted force of their genius and industry, acquired a reputation which has not yet "gathered all its fame," but which, even at the present time, far surpasses that of all their illustrious contemporaries combined. To those who are about to engage in the study of medicine, it must be interesting and instructive to know, by what means the Hunters rose from the comparatively obscure and humble station in which they were born, to such unrivalled honour. It was the originality, the acute powers of observation and reasoning, the industry and learning, and the natural eloquence of William Hunter, which first enabled him to establish his own character as an anatomist, physiologist, and pathologist of the highest order, and thus to pave the way for his brother John. William Hunter not only laid the foundation of general pathology, which has been cultivated with so much ardour and success during the present century, but of all those splendid discoveries in comparative anatomy, and the absorbent system,

which were made by his brother John Hunter, and by Hewson and Cruikshank.

For the purpose, gentlemen, of exciting you to the most hearty, strenuous, and persevering exertions in the prosecution of those studies upon which you are entering at the commencement of another session, and to set before you a rare example of the most noble and disinterested devotedness to medical science, which we ought all to imitate, I shall now endeavour to point out to you some of those circumstances which principally contributed to form the peculiar character of the great founder of our school, William Hunter, and give a brief outline of his most important discoveries.

Being destined, like Boerhaave, for the Church, he was sent by his father to the University of Glasgow at the age of 14, where he spent five years in the study of the classics and philosophy. Not only did he acquire at this early period of life a thorough knowledge of the Greek and Latin languages, by which his taste was refined, and all the learning of the ancients was brought within his reach, but he acquired what was of equal importance, the power of writing the English language with the greatest perspicuity and force. So deeply was he impressed with the value of this accomplishment, that he was always accustomed in his lectures earnestly to recommend its attainment to his pupils as one of the principal means of acquiring respectability in the medical profession. "Good language, good composition, good writing in every sense," he said, "depends very much on practice and habit. All good writers allow this. The best of them generally speaking confess, that though all their valuable works cost them a great deal of labour, yet that they found the labour of being an author become much lighter after some practice. Now a student who writes out lectures (from short notes) is by that very practice acquiring a facility of writing upon subjects in his profession; of describing all sorts of natural and morbid appearances, of reasoning upon these, of putting his thoughts into the most distinct order, and of expressing them in the most clear and proper language. Besides the honour which arises from the character of being a good writer, we observe in fact that every man in the profession who has been a considerable writer, has in consequence become a considerable practitioner likewise, and the public has always, at least, done justice to respectable writers."

William Hunter attended not only the classes of languages and philosophy at the University of Glasgow; the lectures of Prof. Dunlop, an eminent Greek scholar, of Simson, the restorer of the ancient geometry, and Dr. Francis Hutchinson, the eloquent author of the work on the Beauty of Virtue,

were additional incentives to the strenuous exercise of his faculties, especially as he had the advantage of being stimulated by the example of many kindred spirits, afterwards of great celebrity in letters and science—such as Dr. Mathew Stewart, one of the greatest mathematicians of the age, Dr. John Douglas, Bishop of Salisbury, Dr. Adam Smith, and others of distinguished name. The very Rev. and learned John Lee, D.D., Principal of the University of Edinburgh, has informed me within the last few days of these circumstances, and likewise that at this time various literary societies or clubs existed in Glasgow (under the names of the Eleutherian, the Sophocordian, the Anti-Cappadocian, the Triumpherian) which encouraged great freedom of discussion, and alarmed many serious persons, because they were conceived to give a loose to fancy and to audacious speculations, without being moderated by solid principles. Woodrow says, that it was the practice of the members to *declaim against reading, and cry up thinking*. John Hunter was only four years of age at the time, otherwise we might have inferred that he had been among them; but it cannot be denied that these associations, though not universally guided by prudence, had a tendency to elicit the efforts of powerful minds, and lead to discoveries which, but for such excitement, might have been long unknown. Professor Simson patronized some of these clubs, and, indeed, one of them was called by his name. The effect of the system pursued at Glasgow was allowed by men of discernment, not prepossessed in favour of that University, to have been this—that "whereas among those who studied at that time in Edinburgh, a greater proportion rapidly obtained a marked superiority, the character of the students at Glasgow in general was entitled to the credit of being more steadily intent on the pursuit of solid learning, so that there were few instances of relaxation in the habits of close application."

It was doubtless in a great degree owing to this intellectual discipline, this mental culture, to the knowledge which William Hunter then acquired of the laws of evidence and the rules of investigation, that through life he would take nothing for granted—he examined every thing for himself—and that no statements proceeding even from the highest authorities would he admit as facts, until their truth was clearly demonstrated: even from established truths his conclusions were drawn with the utmost caution. So numerous, varied, and exact were the observations and researches which he always made on every subject he investigated, and so rigorously were the inferences deduced from the facts he had ascertained,—so strictly did he adhere to the inductive method of reasoning, that it would be difficult, nay, I believe

it would be impossible, to point out any material error in his writings, or discover a statement there made, which it had been necessary for him to modify or to retract. "Good heavens," he said, "what pains is required to do any thing with tolerable accuracy!" It was not only in the observation of natural phenomena that this accuracy was displayed, but in his controversial writings the same integrity and inflexible regard for truth are every where equally conspicuous. It is to this striking feature of his character that I am anxious your attention should be directed above all others. There is nothing that ought to excite in our minds such abhorrence and disgust as false statements made from whatever cause or motive in medical writings.

In hypotheses, theories, or mysticisms, he never indulged like many of his predecessors and contemporaries, but confined himself scrupulously to the discovery and interpretation of facts. With a mind so constituted, and so prepared for the investigation of truth, he could not fail to discover that fallacious theories transferred from chemistry, mechanics, and other departments of science, to medicine, had prevailed in all ages, and that a more perfect knowledge of the human body in health and disease was the only sure foundation of rational pathology and practice. The doctrine of Hippocrates, says Sir Gilbert Blane, which referred all diseases to defect or vitiation of the four humours, blood, phlegm, black bile or yellow bile, and the theory of Galen, grounded on the cardinal qualities of heat and cold, moisture and dryness, and other theories proposed to explain all the phenomena of disease, William Hunter discovered at once to be gratuitous assumptions. A little before his time the mechanical powers of the stomach were subjected to experimental research, and Dr. Pitcairn gravely affirmed that he found this viscus in the human subject to exert a force equal to 12,900 pounds in compressing the food in the process of digestion. Our present knowledge enables us to say that he was at least 12,900 miles from the truth. Others, conceiving that chemical power had the chief agency in this function, endeavoured to prove that the changes in the food were produced by heat and fermentation, forgetting altogether the influence of the vital principle. The peculiar sagacity and precision of William Hunter's mind detected at a glance the hollowness of such delusions, and in his lectures he thus facetiously exposed their folly. "Some physiologists, gentlemen, will have it that the stomach is a mill; others that it is a fermenting vat; others, again, that it is a stew-pan; but in my view of the matter it is neither a mill, a fermenting vat, nor a stew-pan, but a stomach, gentlemen, a stomach."

At no former period was the study of medical logic ever more necessary than at the present time, when every species of delusion prevails both in the theory and practice of physic.

Empiricism, whatever form it assumes, and by whatever term it is designated—homœopathy, hydropathy, mesmerism, or animal magnetism, always rests chiefly on superstition and credulity, or imposture, and the picture of it drawn by William Hunter one hundred years ago, represents its present state in Britain much more correctly than many would at first believe. "The uncertainty of cure, both of physic and surgery," he says, "gives the ignorant and hardy empiric frequent opportunities of exulting over science. Ignorance is rash and fearless; knowledge is always cautious and circumspect. The first, amidst much mischief, boasts now and then a random cure; the other, though active when there is a prospect of success, is frequently restrained by the fear of doing harm. At the same time, by this caution, and a proper view of the bounds of the art, the rational practitioner enjoys much secret satisfaction, and has frequently in his turn ample cause of triumph over empiricism. The preceding history (it was a case of aneurism of the aorta about to burst) might illustrate and justify this remark. Yet even in this case empiricks of all kinds were pressed upon him (the patient) who tempted and tortured him with vain promises. They understood no more of the case than that it was thought desperate; they knew they could lose no reputation; they were conscious they could not feel remorse; and were desirous at all events of being in fortune's way. A foreigner insinuated that it was a case which English surgeons did not understand, and pressed warm bathing and the Montpellier method of curing the pox. A quack recommended his pill, which he said was so peculiarly adapted to inward swellings, that none of them could withstand its operation. An old woman would engage to cure him with her herb-poultice, which she said, though she was turned of threescore-and-seven years, had never once failed her in such a case: and the poor man could not help having a partiality for the remedy, when she protested there were above thirty herbs in the composition, and that she gathered them all with her own hands. Another, who knew that an aneurism is seldom curable by any other means, proposed the operation: but the patient was prevailed upon to reject the proposal, when he understood that it must be a very painful operation, and that he could not expect that his life would be comfortable after the great artery was tied so near the heart."

At the age of 19, having relinquished his

intention of entering the church, William Hunter resolved to devote himself to the medical profession.

In 1737, he became a pupil of Dr. William Cullen, then recently established at Hamilton in Lanarkshire, whose disposition, genius, and love of knowledge, were congenial with his own. This was another circumstance which contributed powerfully to the development of his peculiar talents; for though Dr. Cullen was addicted to speculation, and adopted hypotheses to explain the symptoms of disease, which are now rejected as unfounded, it is certain that no physician, as his biographer observes, "inculcated more strongly the doctrine, that all our knowledge of nature is derived from experience, or who took greater pains to distinguish between well-ascertained matters of fact and the assumptions and conclusions of hypothetical reasoning." There was no man in the last century whose writings, lectures, and example, had a greater influence on the opinions and practice of the members of the whole medical profession in this country, and on the general progress of medical science, than Dr. Cullen; or who possessed the power in a higher degree of rousing his pupils to exertion, and of infusing great ardour into their minds.

William Hunter passed three years in the family of this excellent friend and preceptor, and these, as he has been often heard to acknowledge, were the happiest years of his life. The subjects which, at this early age, most deeply engaged his attention, may be readily understood by the following passage in one of his letters addressed to Dr. Cullen a few years after their separation:—"Well! how does the animal economy appear to you, now that you have examined it, as one may say, with precision? I have good reason to put the question to you: because in my little attempts that way, since I began to think for myself, nature, where I am best disposed to mark her, beams so strong upon me that I am lost in wonder, and count it sacrilege to measure her meanest features by my largest conceptions."

At the age of 47, he thus addressed himself to Dr. Cullen: "I am resolved never to be much richer than I now am. I am independent, and wish to do something that shall be mentioned when the few years which I have to live are gone. Now, you shall see to what I purpose all this. I should like to be joined with you in the end of life as in the beginning."

There is reason to believe that his acquaintance with Dr. Cullen was one of the most fortunate incidents of his life, and I am convinced, from experience, that there is no circumstance which exercises so powerful and so lasting an influence upon the mind of a medical student, as the dispositions and

characters of those with whom he first associates. Nothing tends so much to lighten the toils of mental exertion, to promote intellectual improvement, and to cheer the loneliness of the student's life, when separated from his friends and relations, than the society and conversation of those who are engaged in the same pursuits, who are devoted to the acquisition of professional knowledge, and whose conduct is regulated by pure and honourable principles. Nothing tends more certainly and speedily to utter degradation and ruin than an intimacy formed with those who are idle, frivolous, and dissipated, and whose tastes are low and depraved. The fairest prospects in life have often been blasted at the outset by evil communications.

In 1741, at the age of 23, William Hunter came to London for the purpose of completing his medical education, and afterwards returning to Hamilton to join Dr. Cullen in practice. He entered as a surgical pupil of St. George's Hospital, and it was here, "attending the sick and dissecting the dead," as he expressed it, "that he discovered the direct road for becoming truly great in his profession." The winter before, he had spent at Edinburgh, attending the medical lectures delivered in the University, and especially those of Dr. Monro on anatomy. From the account which he has given of the manner in which anatomy was then taught by one of its most distinguished professors, you will be enabled fully to estimate the immense advantages which are now enjoyed, compared with those which were possessed by students a century ago, when there was no school for practical anatomy in London. "There," he says, "I learned a good deal by my ears, but almost nothing by my eyes, and therefore, hardly any thing to the purpose. The defect was, that the professor was obliged to demonstrate all the parts of the body, except the bones, nerves, and vessels, upon one dead body (the course lasting six months). There was a fœtus for the nerves and blood-vessels; and the operations of surgery were explained to very little purpose upon a dog. "All was harangue, and very little was distinctly seen."

This unprofitable mode of teaching anatomy was probably the cause why he always took such pains to inculcate "the necessity of striving to get clear ideas of every thing." "The eyes and ears of the student," he said, "ought to be employed in that service only. He is first to understand; let him remember as he can; and, to say the truth, as it is a difficult task to remember what we do not understand, so it is hardly possible to forget what we clearly comprehend: so that, in getting distinct and clear ideas, especially of the objects of our senses, we are taking the

best method of fixing them for ever in the memory."

Dr. Smellie, also a native of Lanarkshire, was at that time the most eminent teacher of midwifery in London, and the greatest systematic writer on the subject in existence. William Hunter resided with him for a short period to acquire a practical knowledge of midwifery, and then accepted of an offer made to him by Dr. Douglas, the anatomist, to assist him in his dissections, and superintend the education of his son: his classical attainments led to this appointment. A new career was thus happily opened to his talents and ambition, and he resolved to remain in London, and dedicate his life to the practice of midwifery and the improvement of anatomy and pathology. To prepare himself for the duties of an anatomical teacher and accoucheur, he determined to subject every part of the human body to the severest scrutiny, and to acquire the most minute knowledge that could be obtained by dissection of the intimate structure of every organ. He allowed nothing to interfere with his resolution to master his profession,—pleasure and amusement could not allure him for a moment from the dissecting room and the wards of the hospital. He drudged, like Selden, days and nights, and grappled with and conquered all the difficulties which opposed his progress, and would have overwhelmed less resolute minds. He knew that knowledge could only be acquired by labour, and that labour was the only price of solid fame. Zealously and steadfastly he pursued the object which he had in view, and set an example of vigorous, patient, laborious industry, which has never been surpassed, and which all must follow who are eager to attain legitimately the highest rank and honours in the medical profession; and, what is of still greater consequence, and a still higher object of ambition, who would possess the power to be useful to their fellow creatures, by removing and alleviating their diseases. The fruits of such unwearied efforts soon became manifest, and at the age of 25, only two years after his arrival in London, he presented to the Royal Society an essay on the Structure and Diseases of Articulating Cartilages, which is now admitted by all competent judges to contain every fact of importance which has yet been discovered respecting the anatomy of the human joints, and an accurate outline of some of their most dangerous diseases. I have the authority of Sir B. Brodie for asserting, that in this essay, which has been published in the 42d volume of the *Philosophical Transactions*, for 1743, William Hunter "anticipated all that Bichat wrote sixty years afterwards respecting the structure and arrangement of the synovial membranes." Of the truth of this you will readily

be convinced by the following passages. After accurately pointing out the peculiarities of each articulation, and the varieties of mechanical composition calculated to all the varieties of motion in the human body, and the intimate structure of cartilage, he thus describes the synovial membranes of the joints:—"We are told by anatomists that cartilages are covered with a membrane named perichondrium. If they mean the cartilage of the ribs, larynx, ear, &c. then indeed such a membrane is very conspicuous; but the perichondrium of the smooth articulating cartilages is so fine and firmly braced upon the surface, that there is room to doubt whether it has been often demonstrated or rightly understood. This membrane, however, I have raised in pretty large pieces after macerating, and found it to be a continuation of that fine smooth membrane that lines the capsular ligament folded over the end of the bone from where that ligament is inserted. On the neck of the bone, or between the insertion of the ligament and border of the cartilage, it is very conspicuous, and may be pulled up with a pair of pincers; but where it covers the cartilage, it coheres to it so closely, that it is not to be traced in the recent subject without great care and delicacy. In this particular it resembles that membrane which is common to the eyelids and the fore part of the eye-ball, and which is loosely connected with the albuginea, but strongly attached to the cornea. From this description it is plain that every joint is invested with a membrane, which forms a complete bag, and gives a covering to every thing within the articulation, in the same manner as the peritoneum invests not only the parietes, but the contents of the abdomen."

But William Hunter has not merely given in this paper the best description that has ever appeared of the structure of the human joints; he has likewise given an excellent outline of the morbid anatomy of the synovial membranes and the cartilages, and proved that inflammation and ulceration of these textures may exist independently of disease of the bone. It thus appears, that in this hospital the investigation of the pathology of the joints had commenced, and made considerable progress, a century ago.

"So far as I have had opportunities of examining diseased joints, either after death or amputation, I have found, according to the nature and stage of the disease, the cartilage in some parts reddish and lax, or soft and spongy, or raised up in blisters from the bone, or quite eroded, and perhaps the extremities of the bone carious, or, lastly, a bony ankylosis formed; but I could never see, nor indeed hear, of the least appearance of an exfoliation from the surface of the cartilage. Now if we compare the texture and

morbid phenomena of those cartilages together, all the diseased appearances will admit of as rational a solution as perhaps any other part of the vitiated œconomy."

"It appears from maceration that the transverse fibres are extremely tender and dissoluble, and that the cohesion of the parts of the strait fibres is stronger than their cohesion with the bone. When a cartilage therefore, is inflamed, and soaked in purulent matter, the transverse or connecting fibres will the soonest give way, and the cartilage becomes more or less red and soft, &c. If the disorder goes on a little longer, the cartilage does not throw off a slough, but separates from the bone where the force of cohesion is least, and where the disease soon arrives by reason of the thinness of the cartilage. When the bone is thus exposed, the matter of the ulcer, or motion of the joint, corrodes or abrades the bony fibres."

When this paper was written, John Hunter was only 15 years of age, and did not enter his brother's dissecting-room till five years afterwards. J. Hunter came to London in 1748.

About the same time (1743) that this essay appeared in the *Transactions of the Royal Society*, Dr. W. Hunter commenced that elaborate investigation of the absorbent system, which terminated about 1746 in the important discovery, that the lymphatic vessels are absorbing vessels all over the body, "that they are the same as the lacteals; and that these together constitute one great general system dispersed through the whole body for absorption; that this system only does absorb, and not the veins; that it serves to take up and convey whatever is to make or to be mixed with the blood, from the skin, from the intestinal canal, and from all the internal cavities or surfaces whatever." The lymphatics had generally been regarded before this as veins to return the lymph from such arteries as were too small to admit the red blood or the serum. The anatomists of Europe, for one hundred years before, were of opinion, that the lymphatic system was wanting in birds and fishes; but William Hunter, having discovered the importance of the absorbent system in man and in quadrupeds, could not rest satisfied that it was wanting in the other two great classes of animals, and kept that object, and every thing else that could throw light on the absorbent system, constantly in his view. It was entirely in consequence of this deep conviction in the mind of William Hunter that his brother's attention was called to the subject, and that he was led to search for the lymphatics, and to discover them first in birds and then in a crocodile. Mr. Hewson afterwards, by a continued course of observation and experiments made in the dissecting rooms, under the direction and at the expense of William Hunter, demonstrated

the lacteals and lymphatics both in birds and fishes, "which confirmed the use and importance of the absorbent system in the human body, and in comparative anatomy was one of the greatest improvements that could have been made to establish the universality of nature's laws in animals." It was at the express desire, and under the enlightened direction, and in the house of William Hunter, that Mr. Cruikshank, at a still later period, traced the ramifications of that system in almost every part of the human body. Great honour is undoubtedly due to these three anatomists for their minute dissections of the absorbent system, but it must not be forgotten, that they were directed, and animated, and sustained in the pursuit by the philosophical and comprehensive mind of William Hunter, and that the whole investigation originated with him. He did not set too high a value upon the discovery of the functions of the lymphatics when he asserted, that it was the greatest, both in physiology and pathology, that anatomy had suggested since the discovery of the circulation of the blood.

He was now involved in all the harassing cares and duties of an accoucheur and teacher of anatomy and midwifery, but his scientific pursuits were not interrupted; and from 1746 to 1783 he not merely delivered every winter the most complete course of lectures on anatomy that had ever been given in London, but continued at intervals to enrich the science of medicine with the most valuable contributions it had ever received. Having no family, and setting no value upon money, except as a means of acquiring knowledge and communicating it to others, every moment that could be spared from the active duties of his profession was devoted to the minute investigation of the human body, and in making the finest preparations to illustrate the structure and functions and diseases of the different organs. Most of these preparations are still preserved in the Museum at Glasgow; and I am assured by Mr. Wharton Jones, who has examined those of the human eye with care, that they afford proofs of the utmost anatomical accuracy and delicacy. Those which shew the vessels of the pupillary membrane and crystalline capsule have never been surpassed in accuracy and minuteness; and this Mr. Jones considers to have been the finest point in anatomy at that time, and first made out by William Hunter. He has thus described these vessels:—"I do not know that any person has taken notice of a circumstance relating to the vessels of the membrana pupillæ and the crystalline capsule, which I have observed, and can demonstrate by injections, both in the human fœtus and in that of the quadruped; and as I am upon the subject, I will give the observation here

in a few words. The artery of the crystalline capsule does not terminate at the great circle of that humour. Its small branches pass that circle, and run a very little way on the anterior surface of the crystalline humour, before the points of the ciliary processes; then they leave the humour and run forwards, supported on a very delicate membrane, to lose themselves in the membrana pupillæ. The artery, therefore, that passes through the body of the vitreous humour, goes first to the crystalline capsule, and then to the membrana pupillæ. The membrana pupillæ receives two different sets of arteries, one larger, from the iris, and the other much smaller, but very numerous, from the crystalline capsule. When the membrana pupillæ exists, there is a fine vascular membrane all around, which passes on the posterior aqueous chamber, from near the edge of the crystalline humour to the edge of the pupilla."—*Med. Comment.* p. 63.

This description, Mr. Jones informs me, was not understood by succeeding anatomists, and a part of it was merely noticed by them. M. Jules Cloquet's description especially is very imperfect compared with that of W. Hunter. The full description by him has only recently been brought to light, by the German anatomist, Henlé. All this proves that William Hunter, as a minute and accurate anatomist, was far superior to Albinus, who first described the pupillary membrane, and was not inferior to any anatomist then in Europe.

It would exhaust your patience if I were to do much more than enumerate the various contributions which he afterwards made to anatomy, pathology, and midwifery. His papers have never been collected. The greater number of them are now upon the table; they are all the most valuable monographs that have ever been published on the different subjects of which they treat.

In 1747, he discovered the ducts of the human lachrymal gland. About the beginning of November, 1752, in the presence of M. Gallie and some others, he injected the vas deferens with mercury, and by that method filled the whole epididymis, and the tubes that come out from the body of the testis to form it; and observed in this operation, that the mercury continued to run, and the body of the testis to become gradually more turgid and heavy, for some time after the external parts were completely filled. He shewed this preparation next night at his public lecture, and said that he believed we should find the internal tubuli likewise filled, but that he would not venture to open it till he had got another, lest he should spoil what was already a valuable preparation. "I desired my brother," he says, "to lose no opportunity of making the

trial." This was communicated as a piece of anatomical news to Dr. Donald Monro, then at Edinburgh, by a letter from Dr. Garrow, physician at Barnet, some time in the same month. In some such time as a week or a fortnight after the first public demonstration, my brother made the trial, and succeeded. He shewed me the testis opened, and the tubular internal substance very generally filled with mercury. This preparation, which I still preserve, I shewed at my public lecture that very evening, with marks of being well pleased with the discovery. In my next course of lectures, viz. February, &c. 1753, and in every course since that time, I have shewn the same, and some other preparations of the same kind, and always gave the history of the discovery, to avoid taking that share of it from my brother which belonged to him.—*Med. Comment.* Lond. 1761, p. 1.

In 1754 he first described retroversion of the uterus.

In 1757, History of an Aneurism of the Aorta, with some Remarks on Aneurism in general.—*Med. Obs. and Inquiries*, v. i. 323.

In vol. ii. An Account of a Diseased Tibia, and Remarks on the Symphysis Pubis.

In 1757, in the second volume of the Medical Observations and Inquiries, he published a paper entitled, "The History of an Emphysema, and Remarks on the Cellular Membrane and some of its Diseases." He first pointed out, in this essay, what he had discovered thirteen years before, the distinction between the adipose tissue and the common reticular or cellular membrane, which is now admitted by all anatomists to be well founded. "Wherever there is fat in the human body," he says, "I apprehend that there is a particular organization, or glandular apparatus, superadded to the reticular membrane, consisting of vesicles or bags, for lodging the animal oil, as well as vessels fitted for secretion; so that I would compare the marrow in the bones to the glandular or follicular parts of the fat or adipose membrane, and the network of bony fibres and laminæ, which supports the marrow to the reticular membrane, which is mixed with and supports the adeps."

The modification of disease by the tissue affected is clearly pointed out in this paper; this has been admitted by all writers on pathology; and it contains some of the fundamental doctrines of inflammation, afterwards adopted by his brother John, particularly that inflammation always precedes suppuration, and that pus may be formed without any visible ulceration or breach in the solids of the parts. "The cellular membrane," he says, "is commonly supposed to be the seat of the abscess, or of suppuration. Indeed, considering the universality of this membrane, it can hardly be otherwise, for

the matter of an abscess must lie in the interstices of the parts; it cannot be contained within the fibre of a muscle, or of a tendon, for example; and therefore commonly it must, upon dissection, be found in a space which is naturally filled with the cellular membrane. Yet matter or pus is likewise found in the larger natural cavities of the body, in which there is no cellular membrane: in the cavity of the chest, for example. In these two different cases, I apprehend the pus or matter to be of a different nature; and that, in general, pus is of two different kinds: one is attended with a manifest breach in the solids, such as the matter of a common boil, which we shall for the future call abscess; the other is collected upon the internal surfaces of cavities when inflamed, and is not attended with any visible alteration or breach in the solids of the part, which we shall call inflammatory exudation. Pus of all kinds is therefore produced or preceded by inflammation. In an abscess the part is first in a state of inflammatory hardness and fulness; and generally in the centre of the swelling the vessels and fibres are broke and dissolved, and the fluid which is found in this ruptured part is called pus. We suppose this pus to be composed of the juices which were contained in the distended vessels, and of that part of the vessels themselves which was broke down, or melted by the suppuration. As the abscess ripens, the centre grows softer, from the accumulation of the fluids in the cavity of the abscess, and the surrounding inflammatory hardness goes off, both because more of the loaded vessels are reduced to pus, and because their rupture removes the obstruction to the circulation.

"I am inclined to think, that a very small quantity only of the vessels is destroyed in common abscess, be they ever so large; and thence we observe that there are hardly any traces left of large abscesses that heal up quickly. Indeed, when they have continued open a long time, as in ulcers, or when suppurations have been kept up artificially for a length of time, as in issues, the part heals up hollow, and the skin is immoveably fastened on the muscles and bone, as if all the cellular membrane had been destroyed. But even in these cases I suspect that the cellular membrane is rather condensed than destroyed, and what was naturally a loose spongy flesh is converted into a firm, compact, and unyielding substance.

"The pus of an abscess cannot diffuse itself along the cellular membrane in the same manner as extravasated blood or water, because the ruptured cavity in which the pus is contained is always encompassed by an inflammation, which hardens and unites all the fibres and laminae of the cellular membrane, and by that means renders it imper-

meable." He then minutely describes the manner in which abscesses make their way to the surfaces.

"Another kind of pus is that formed," he adds, "without any apparent breach or dissolution of the solids, and is therefore only a sort of inspissated serum, or inflammatory exudation. We occasionally meet with collections of this kind in all the natural internal cavities of the body. I have seen it in great quantity in the cavity of the abdomen, in that of the thorax or of the pleura, and in the pericardium, where there was no visible suppuration, ulceration, or dissolution of the solids on any part of the surface all round. This kind of pus is generally thinner than that of an abscess, and the containing surface is more or less covered with a glutinous concretion or slough, of the same colour as the fluid; in some parts adhering very loosely, in others so firmly, that it can hardly be rubbed off; but still the surface covered by these sloughs is without ulceration or loss of substance. This I have observed to be the case in all apbthons sloughs of the nose, mouth, throat, and trachea, that I have had occasion to examine attentively, both in young and old people. We every day meet with the same sort of pus by exudation from the more external surfaces of the body, which have no cuticular covering, or a very thin one, and which are naturally moist; when inflamed that moisture puts on the appearance of pus. Such discharges we see from the eyes, nose, throat, lungs, urethra, and vagina, and such I have seen collected upon the surface of the intestines as soon as they begin to inflame, when exposed to the air in an unsuccessful operation for the exomphalos.

"I imagine, too, that the pus of every sore, in the state of healing, or incarnation and cicatrization, is made up of juices only, not of a mixture of solids and fluids. The same thing is to be supposed of a blistered part, when in a healthy state. I presume we are to believe that the pus of a healthy wound is not discharged by exudation through the coats of the shooting vessels, but rather through their orifices; and, indeed, it seems not improbable, that every surface of the body, when inflamed to the degree of giving a purulent discharge, may be nearly in the state of a healing wound—they not only yield a similar discharge, but their surfaces, too, when in contact, unite, and their vessels shoot mutually into each other."

Vol. vi. Medical Observations and Inquiries, contains an Account by him of an Extraordinary Conformation in the Heart—History of an Obstinate Disease of the Heart.

1767.—Observations on the Bones, commonly supposed to be Elephants' Bones, which have been found near the river Ohio, in America.—*Phil. Trans.* vol. lviij.

In 1768, he was appointed, by the King, Professor of Anatomy to the Royal Academy of Arts. "This appointment opened a new field for his abilities, and he engaged in it as he did in every other pursuit of his life, with unabating zeal. He now adapted his anatomical knowledge to the objects of painting and sculpture, and the novelty and justness of his observations proved at once the readiness and intent of his genius."

In 1770, was published An Observation on the Insensibility of Tendons, by John Teekel, Surgeon: with an Introduction by Dr. Hunter.—*Med. Obs. and Inquiries*, vol. iv.

1770.—Appendix to the Preceding Article—Case of Retroversion of the Uterus, by W. Hunter, M.D. F.R.S.—*Med. Obs. and Inquiries*, vol. iv. p. 400.

In 1777, with Mr. Watson, he presented to the Royal Society a Short Account of the Illness of the late Dr. Maty, with the appearances on Dissection.—*Phil. Trans.* vol. lxvii.

His researches on the structure and diseases of articulating cartilages, the absorbent system, the ducts of the lacrymal gland, vas deferens, epididymis and tubuli of the testis, on the vessels of the pupillary membrane and crystalline capsule, adipose and cellular membrane, varicose aneurism, &c. would have entitled him, if he had contributed nothing else to human anatomy, to hold the most distinguished rank among the improvers of the science. But his work on the Anatomy of the Gravid Uterus and its Contents, published in 1775, is that on which he had bestowed the greatest labour, and which he foresaw would constitute through all future ages the most splendid monument to his fame. "The appearance of this work," says his biographer, "which had begun so early as the year 1751 (at which time ten of the thirty-four plates were completed), was retarded till the year 1775, only by the author's desire of sending it into the world with fewer imperfections. Something concerning the progress of this work, and of the zeal with which it was prosecuted, may be collected from different parts of his letter to Professor Monro, Senior, in the supplement to his Medical Commentaries.

"On the 11th of February," says he, "I was so fortunate as to meet with a gravid uterus, to which, from that time, all the hours have been dedicated which have been at my own disposal. I have been busy in injecting, preserving, and shewing it, and in superintending drawings and plaster casts of it. I have already made five very capital drawings from this subject. They, and some more, shall be engraved by the best masters as soon as possible, and then the whole shall be published. My first and original intention, you know, was to have published ten plates only; but, thinking the work im-

perfect, I waited patiently for more opportunities of adding supplemental figures. Sixteen plates were finished on this plan several years ago, but still I was dissatisfied with the work as being incomplete, and in spite of the importunity of many friends, I kept it from the public."

All the most important changes which take place in the gravid uterus during pregnancy have been accurately represented in these magnificent engravings. It contains a description and representation of two great discoveries which alone would have conferred immortality upon any anatomist. First, the outer membrane of the human ovum, called decidua, which is the great organ of circulation of maternal blood during the early months, by which the embryo is nourished and the function of respiration performed; and secondly the structure of the placenta and its connexions with the uterus. I shall take another opportunity of stating to you the evidence which completely satisfies my mind that the glory of this latter discovery belongs entirely to William Hunter.

In 1778, he published Reflections on the Section of the Symphysis Pubis.

On the Uncertainty of the Signs of Child Murder in the Case of Bastard Children, by the late William Hunter, M.D. F.R.S. 1783.—*Med. Obs. and Inquiries*, vol. vi. p. 266.

Three Cases of Mal-Conformation of the Heart. 1783.

The Anatomical Description of the Gravid Uterus and its Contents appeared twenty years after the Engravings.

As a proof of the respect and friendship he received from his patients I may quote the following letter from Lord Suffolk, which has never been published. W. Hunter's letter in reply will give you a far better idea of his real character than all that I have said.

Elford, February 18th, 1767.

SIR,—You forbid my addressing you as I meant to do, you restrain my gratitude from flowing in the only channel which is open to it at present. How am I to return the greatest obligations? You gave up everything to us; you resigned your own health to restore her's. Your heart felt for us, and now by a delicacy, a sentiment, a principle, unknown to the mean souls of these times, you rise superior to Reward. You do so, for the only adequate reward must proceed from yourself, independent of any body, I mean the consciousness of what you have done, that sweet reflection which shall soften the pangs even of such scenes as we have witnessed, alleviate all the cruel circumstances of disappointed merit, when success failed the kindest attentions, and the Almighty was not pleased (subluna-

vily speaking) to bless your care, or smile on the resigned fortitude of your patient; indeed, indeed, Hunter, she bore her illness in a manner to make man blush—but enough of that. My business is to beg of you, if reward is an irksome word, to let me substitute regard in its room, and when I come to London to entreat an opportunity of seeing you, and marking that regard. I will say no more of it now, save to insist, if hereafter in life, at any time, in any case, I may be so fortunate as to have it in my power to indulge my own wishes by being able to shew my gratitude to you, essentially as I ought and owe it, that you will do me the pleasure and favour, I will call it justice, freely to command it, for I shall always esteem myself *dum memor ipse mei*!

Your much obliged, though most unhappy friend and servant,

SUFFOLK.

Lady Andover, my sister, and little orphan, arrived safely here the day before yesterday. The child is very well, and has not suffered the least inconvenience from its journey. If she grows up in perfect health, if her beauty is complete, if her mind is as free from blemish as her body, and both are spotless, if she is truly virtuous, free from affectations, easy, unreserved, and with a word, a look, can keep fools at a distance, if in her happy composition, manly courage, and more than manly sense is tempered with female tenderness and endearment, if in every tried character and relation of life she stands unparalleled, the best of daughters, wives, and friends,—if above all she looks to the One Almighty God with humility and submission, religiously conscious that she is rendering herself most acceptable to him by doing her duty here in whatever station it pleases him to place her,—then will she turn out like her mother.

To the Earl of Suffolk.

My Lord,—An indispensable attendance prevented my returning my most sincere thanks, by the first post, for the very great honour which your lordship has done me. Be pleased, then, to accept the thanks of a grateful heart, which cannot express in words what it feels from reading your soothing letter. I am now by your lordship's kind sympathy as happy as I can be after taking such a share in so great a calamity; I feel an inclination to say a thousand things which I must suppress. I wish to talk upon a subject which you must forget. We will take it up in heaven. At this moment I fancy that I have a friend there who listens to my thoughts, and bids me to say to you, in a little time we shall be happy again; who bids me tell you to take care, for her sake, of yourself and of your child.

Allow me to love your child all the days of my life; she will be exactly what you describe and what you wish. Allow me sometimes to see her, that I may indulge a pleasing melancholy, and fancy that I am doing something very agreeable to heaven. It may be preparatory to some exalted enjoyment there. Allow me likewise to offer to your Lordship the best advice I can: as soon as possible, do a force to nature, and go into the busy world again; nothing but that, I think, can restore your peace of mind, and make you, what I am sure you wish to be, a blessing to mankind. May you yourself be blest, both for your own sake, and for loving so tenderly one so worthy of all your affection.—I am, my lord, with unalterable affection, your lordship's, Lady Andover's, your family's, most humble, and most devoted servant,

W. H.

Jermyn Street, February 24th, 1767.

As a lecturer, the character of William Hunter has thus been drawn by Dr. Baillie, one who was fully competent to appreciate his talents, being himself one of the most distinguished teachers of medicine who has ever appeared in London. "No one ever possessed more enthusiasm for the art, more persevering industry, more acuteness of investigation, more perspicuity of expression, or indeed a greater share of natural eloquence, than William Hunter. He excelled, very much, any lecturer whom I have ever heard, in the clearness of his arrangement, the aptness of his illustrations, and the elegance of his diction. He was, perhaps, the best teacher of anatomy that ever lived." As a teacher of midwifery he was not less distinguished, and rendered the greatest service to society by inculcating the propriety of trusting much, in all cases of labour, to the unassisted efforts of nature, and of employing instruments only where absolutely necessary. He rejected all parade, all wrangling, and subtlety, in his lectures, and did not aim so much at shewing his students what he knew, but laboured to show and describe as clearly as possible what they ought to learn. Sir Gilbert informed me, that the great secret of William Hunter's success as a public teacher was after all mainly to be attributed to the minute and profound knowledge he possessed of every subject which he discussed. In advanced life he continued to deliver lectures, though attended with pecuniary loss, because he considered it a duty which he owed to the public to do so. When he was about to close his earthly career, his mind still recurred to that occupation which he had regarded as the most important and delightful of his life. "I wish now," he said, "that I had strength to bear being carried into my

theatre, that I might tell my pupils how much comfort and happiness I feel." When on the brink of dissolution, he said, "if I had strength enough to hold a pen, I would write how easy and pleasant it is to die." His death occurred on the 30th of March, 1783.

Such was the peaceful and happy end of one whose talents through life had been devoted to the active service of mankind, and who had been constantly animated with the exalted sentiments thus expressed to the friend and guide of his early years:—

"As I have no children to absorb my attention, my affection to the public utility, whatever tends to make mankind happier, whatever raises them from ignorance and barbarity, and teaches them to enjoy the higher pleasures of life, I think should be the great objects of men who have been blessed with education. Judge, then, what pleasure I have in hearing of the good works going on with you. The flourishing state of your University gives me a very sincere pleasure indeed, and the more as the cause is so much in yourself. Tell me honestly, if you are not much happier to be so instrumental in doing so much good, and with so deserved a reputation for it, than you could possibly be by any pecuniary income that attention to worldly affairs could bring in. Go on, and in the remaining part of the short life of man, enjoy that longer life of fame which death will not be able to take away."

ON THE WHITE OR OPAQUE SERUM OF THE BLOOD*.

By ANDREW BUCHANAN, M.D.

Professor of the Institutes of Medicine in the
University of Glasgow.

"It is well known to all who have been in the habit of examining the characters of the blood, that the serum which separates from it, instead of being transparent and of a yellow colour as we usually find it, is sometimes opaque and turbid, white as if milk had been diffused through it, or otherwise discoloured. Such serum is usually spoken of as white or milky serum."

After an historical view of the observations made and opinions entertained upon the subject of milky serum, in which Haller, Tulp, Hewson, Hunter, Dr. Trail, Dr. Christison, Dr. Williams, and M. Lecanu, are referred to, Dr.

Buchanan proceeds to say: "My attention was particularly directed to this appearance of the serum in the year 1840, owing to the frequency with which it presented itself during some experiments I was then engaged in making on the constitution of the blood. I observed with Hunter, that it was of very common occurrence in the blood of young women, who desired to be bled, either because they were, or supposed themselves to be, pregnant; and whom, if no circumstances forbade, it was the custom to gratify in their request. Now, as these young women were for the most part strong and lusty, and therefore likely to take their food well, I was in doubt whether to ascribe the whiteness of the serum to their peculiar state of body, or to the food which they had probably taken not long before. To resolve these doubts, the most direct mode was to have a person in sound health bled at different periods after a full meal, so as to observe the effects of digestion upon the blood. Accordingly, a strong healthy young man, to whom a good dinner was an equivalent for the loss of a few ounces of blood, was easily prevailed upon to submit to the following regimen and treatment. He had no breakfast, and at four o'clock had for dinner one pound of beef-steak, half-a-pound of bread, sixteen liquid ounces of brown soup, and half-a-bottle of porter. Three ounces of blood were then taken from a vein in the arm at three different periods; the first time, half an hour after the meal; the second time, an hour and forty minutes after it; and the last time, next morning at eight o'clock, or sixteen hours after the meal, no food having been taken in the interval. The blood as it issued from the vein had the usual appearance, and the serum which separated from it was about the same in quantity each time. The first time the serum was whitish and turbid; the second time it was like whey; while the third time it was perfectly limpid. The crassamentum on the two first occasions exhibited nothing peculiar, while on the last it was covered with a transparent fibrinous crust beautifully interspersed with white dots; which led the medical friend, who assisted me in these investigations, to compare it to a precious stone.

* From the Transactions of the Glasgow Philosophical Society, March 1844.

As it might be supposed that this

young man's blood was white before he took dinner, the two following trials were made to obviate that objection.

A vigorous man of about 35 years of age, after fasting 19 hours, had for dinner, twenty ounces of beef-steak, sixteen liquid ounces of brown soup, and eight ounces of bread. He was bled immediately before his meal, and three times after it, two ounces of blood being taken away each time. The serum obtained from the first bleeding before the meal was perfectly limpid; the serum from the second bleeding, three hours and fifteen minutes after the meal, was turbid; the serum from the third bleeding, eight hours and fifteen minutes after the meal, was still thicker; while that from the last bleeding, eighteen hours after the meal, was again quite limpid, although some supper had been eaten in the interval.

The young man first mentioned, after fasting eighteen hours, dined upon sixteen ounces of brown soup, four ounces of bread, eight ounces of potatoes, twenty ounces of beef-steak, and sixteen ounces of London porter, and fasted eighteen hours after the meal. He had blood taken from his arm four times to the extent of two ounces each time. The serum of the blood first taken, immediately before the meal, was of an amber yellow, and quite transparent; the serum from the second bleeding, two hours and ten minutes after the meal, was turbid; the serum from the third bleeding, eight hours after the meal, was turbid; the serum from the third bleeding, eight hours after the meal, was exactly of the colour of water gruel and quite opaque; the serum of the blood last taken, eighteen hours after the meal, was still turbid, its limpidity not having been, as after his usual fare, restored by an eighteen-hours' fast.

In neither of the two last cases did the blood, as it issued from the arm, present white streaks or any thing else unusual. The crassamentum of the blood drawn before the meal was in both cases of the usual red colour on the surface, as also that drawn first after the meal in the last case; but in all the other instances it exhibited the same *pellucid fibrinous crust* already described, although not dotted in the same remarkable way. We can scarcely avoid the conclusion that this pellucid crust is connected with finished digestion,

when we reflect that out of nine bleedings practised within eighteen hours after a very full meal, this crust was observed on every occasion, if we except those in which the blood was drawn within three hours and a quarter of the period of taking the meal.

These observations, the accuracy of which I have since had opportunities of confirming, appear to me to leave no doubt as to the origin of the white colour of the serum of the blood. When a healthy man is bled fasting, his blood yields serum of a transparent yellow colour, like light Sherry wine, varying in the depth of the yellow tint, but always perfectly clear. In about half an hour after taking food, the serum becomes turbid, the discolouration increases during several hours till it attains its maximum, after which the serum becomes again gradually clearer, till its limpidity is perfectly restored. The period at which the discolouration is greatest, and the length of time during which it continues, must depend mainly on the quantity of food taken, but also in some degree on its quality, as some kinds of food are digested more readily than others. It may, however, be stated, so far as the observations I have made enable me to judge, that after a full meal of different kinds of food, the discolouration is greatest about six or eight hours after the repast, and that probably somewhat more than an equal period elapses before the serum regains its limpidity. The differences of colour, which are considerable, probably depend on the different substances digested: and it is interesting in this point of view to remark, that the colour varies in the successive bleedings after the same meal, as if the differentialimentary principles produced different kinds of discolouration, and entered the blood-vessels at different periods.

If these views be correct, it is clear that a milky state of the serum of the blood is a phenomenon of the healthy body, and cannot in itself be regarded as a symptom of disease. There are, nevertheless, certain circumstances in which this appearance may serve to indicate the existence of disease, as when it continues during a longer period than according to the laws of health it ought to do. A case is mentioned above, in which, after eighteen hours fasting, the serum of

the blood was still loaded with white particles. The only inference that could be drawn from this fact, was, that the individual had taken a more than usually large quantity of food, and that the digestion in the blood-vessels was protracted in proportion. Perhaps it would not be warrantable to deduce any other inference, even were the milkiness to continue for twenty-four or thirty-six hours after a full meal. But when this milkiness continues for several days, although the appetite is gone and no fresh supply of food taken, it then becomes probable that the digestion in the blood-vessels is no longer going on, as in the healthy state; being, like all other functions of the body, subject to retardation and derangement from the condition of the organs by which it is performed. Thus Morgagni found the serum white in the blood of two patients labouring under fevers; of which he describes the one as malignant and attended with much danger, and the other as verging to malignity. In the former, the whiteness was observed in blood taken by the three last of four venesections which were required; and in the latter, in blood taken on the third, and again on the fifth day of the disease.*

I conclude with a few remarks upon the physical and chemical characters of white or milky serum.

The colour of the serum is generally a milk-white; sometimes a cream-yellow, or a yellowish-brown; when the liquid bears a striking resemblance to thin oatmeal gruel. There is sometimes little discolouration, the serum merely losing its limpidity, and changing its hue so as to resemble a weak syrup made of coarse sugar.

In all the instances in which I have examined the liquid with the microscope, it showed a great number of solid granules mechanically suspended in it. They are less in size than the corpuscles of the blood, generally of irregular shape, but often spherical, and having the appearance of a nucleus in the centre, most probably from the refraction of light. These particles were as abundant in the syrup-like serum as in the more opaque varieties; but they were less regular in shape, and seemed to be themselves translucent.

It sometimes happens, as has been

observed both by Hewson and Hunter, that after the liquid has stood for some time, the white particles separate from it, and rise to the surface like cream. Hewson attempted to effect this separation by churning the serum, but without success. I accidentally hit upon a process by which the object is readily effected. It consists in saturating the liquid with common salt, which so much augments its specific gravity, that the opaque particles becoming relatively lighter, rise to the surface, either immediately, or soon after. This process has the further advantage of preserving the liquid.

The white matter separated by the filter is insoluble in water, and is thus easily purified from the salt with which it is mixed on the filtering paper, by steeping the latter in water, and then cautiously drawing off the water holding the salt in solution. Thus obtained it has the form of a fine white powder, which in two specimens in my possession bears a very close resemblance to wheaten flour. On holding a little of it in the flame of a spirit lamp upon a platinum spatula, it was immediately charred, and burned away almost completely. Dr. R. D. Thomson was kind enough to examine a specimen of it for me, but it was too minute in quantity to admit of a satisfactory analysis. He found it quite insoluble in ether and alcohol, while it dissolved in caustic potash. On boiling it in a solution of sugar of lead, it gave traces of black sulphuret. He concluded, therefore, that it contained no fixed oil, and consisted most probably of a *proteine compound*, like albumen or fibrin.

Postscript.—After the meeting of the Society on the evening of the 13th inst., it occurred to me as possible that the starch might be converted by the organs of digestion into sugar, and be absorbed in that form into the blood. I accordingly procured some yeast next day, and treated with it the serum of the blood, which had been taken three hours after the meal, proceeding in the same way in which I am in the habit of examining diabetic urine. Fermentation ensued, and continued about forty-eight hours, the heat not having been regularly maintained. The serum from the blood of another individual who had used the same diet, but more sparingly, was treated in the same manner, when the same result ensued,

* Morg. Epist. 49, Art. 22.

only the gas was somewhat more abundant. But what struck me as more remarkable still, was, that the serum of the blood which had been taken from both these individuals after fasting, likewise fermented; although the quantity of gas obtained was much less than in the former instances. I found that the largest quantity of gas obtained in these experiments was about equal to that obtained by means of the same apparatus, from a solution of sugar in water, containing five grains to the ounce. Should farther observations confirm the idea here suggested of the existence of sugar in the blood as a normal product, it is obvious that a corresponding modification must be made of the prevailing theories of diabetes, according to which the production of sugar is regarded as the essential derangement of action in which that disease consists.

[Dr. Buchanan's observations go to prove that the ordinary kind of white serum is caused by the presence of chylous matter in the blood; and this conclusion agrees with the researches of Mr. Gulliver, who states that he often observed a milky condition of the serum in young and perfectly healthy animals during digestion, both in the arterial and venous blood (Appendix to Gerber's Anatomy, p. 21 and 22). He also found the milky matter to be, both in its chemical and microscopical character, identical with the *molecular base* of the chyle, which there is every reason to believe is of a fatty nature (Gerber's Anatomy, Note, page 56, and Appendix, p. 23). It is true that a few globules about $\frac{1}{100000}$ of an inch in diameter existed in the milky matter; but the mass of it was composed of very minute molecules, which may be assumed as the characteristic element, as the ground or base of the chyle.

And thus far it is easy to reconcile these facts with the facts announced by Hewson; who states that the milky matter of blood is composed of exceedingly minute globules, comparable to the smallest globules of milk, spherical in shape, regular or equal sized, and only just visible under a lens of $\frac{1}{23}$ of an inch focus, (Exp. Inquiries, part I, third edition, page 141, et seq.) a description agreeing remarkably well with Mr. Gulliver's account of the mo-

lecular base of the chyle, especially when we recollect that Hewson, like Gulliver, considered the milky matter of blood to be of a fatty nature (loc. cit., p. 149).

Thus far Hewson's facts seem to be incontrovertible. Not so, however, the explanation which he has given of these facts. He did not think it probable that the milky serum was caused by unassimilated chyle, because he found the appearance in persons of bad appetite, who were subject to vomiting; and finding this appearance in the blood of persons of plethoric habit, inclined to corpulency, with a stoppage of a natural evacuation, he conjectured that the milky serum was caused by reabsorbed fat (loc. cit., p. 150). Yet he adds in a note, that he would not conclude that the chyle does not in the human subject occasionally colour the serum; and if, like Dr. Buchanan and Mr. Gulliver, Hewson had carefully observed the blood of healthy brutes and of man during digestion, it is probable that his deduction from the facts would have been similar to the results above given.

But, after all, it is not improbable that there are two, if not more, kinds of milky serum; one dependent on an admixture of chylous matter, and another connected with causes of a more obscure nature occurring in disease. Of the latter sort, the white serum observed by Morgagni in malignant fever, and cited by Dr. Buchanan (p. 7), may be regarded as an example.

The subject, therefore, requires further research; and it is to be hoped that this will be undertaken by an observer like Dr. Buchanan.—ED. GAZ.]

ACESIUS*:

A SURVEY OF THE ETHICAL RELATIONS OF
MEDICINE.

By C. F. H. MARX, M.D. &c.

(For the London Medical Gazette.)

[OUR readers were, we believe, unanimous in their approbation of the elegant essay, on the Decrease of Disease, by the accomplished Professor of Göttingen, which appeared in the pages of our volume just concluded. We have reason to think that the series of short papers, of which the first now appears,

* *Acēsios*, the Healer, from *acēopai*, medeor, and *acēsīs*, medicamentum.—ED. GAZ.

from the same admirable pen, that only leaves traces of goodness and truth, of wisdom and piety, where it has been, will prove no less acceptable to the patrons of the LONDON MEDICAL GAZETTE. We have therefore great pleasure in presenting them with the Preface, and first Letter, of Dr. Marx's *AKeios*, this day; promising, in the name of the author, short biographical notices of the several personages to whom his letters are addressed, by and by.—ED. GAZ.]

PREFACE.

AKESIUS (*AKeios*), or the Healer, was one of the names by which the Greeks designated the Divinity whom the Egyptians entitled Harpokrates. Born at the winter solstice, he was emblematical of the weakness of the sun at mid-winter; but he also typified the hope of renovated life with the return of the god of day to the superior signs. He was therefore an apt emblem of the sick man's feebleness coupled with the prospect of his recovery. Harpokrates was represented with his finger upon his lips, significant of the holy reserve which the initiated into his mysteries were held as pledged to observe.—(Sprengel, Hist. of Medicine, 3d edit. i. p. 72.)

I attach myself in the following pages to the first consolatory and hope-bringing symbol especially. My purpose is to pass in earnest review some of the most essential and momentous topics of the healing art. Secrets, mysteries, however, if any such there are or ought to be in medicine, I mean not to touch upon. I do not treat of methods of cure, nor yet of curative means; but of things which lie open to every eye, which are engraven in every heart, and which are most intimately connected with the very soul of the medical profession and of medical practice—the ethical, the moral, the individually reputable—these are the subjects that form my theme.

That I have thrown my thoughts into the shape of letters happened from this; that I naturally had an individual in my eye,—some master in one department or another of our art,—whose character, purposes, fate in life, or autobiography, seemed to me particularly to illustrate the subject that lay before me. To him, almost naturally, I addressed myself. It will be seen that

he with whom I thus hold converse is never of the present day; he is often of an age that has long gone by. But I have in this way gained ample scope for the selection of my correspondents, and have felt myself perfectly free to write as my thoughts prompted me; and I think that he who is not indisposed to the purpose which I have at heart in these letters, and who approves of their tendency, will excuse me the fancy which has led me out of the busy present, to address myself to the spirits of departed greatness.

C. F. H. MARX.

Göttingen, May 16, 1844.

TO STIEGLITZ,—

Ever since the 30th of October, 1840, when you said farewell to your friends upon earth, not my letter-paper but my days have been surrounded with a mourning rim.

With the unexpected news of your decease, I felt that the death of my friend had made a rent in my heart, that the departure of a great man was a kind of flaw in my nature.

Nearly four years have fled under impressions of various kinds since then; but my spirit is still shaken as if I had lost you only yesterday;—the magnitude of the loss has only become clearer to my mind.

To bring the long years in which I lived with you in such familiar interchange of thought and sentiment more closely before me, and to hold a kind of resurrection-festival to your love and honour, I once began to rear a monument of tender recollection to your memory; but however excellent the material, the chisel in my trembling hand refused the task.

And, to speak truth, my poor presentment is not required: for to contemporaries you were a lofty model, and your works remain to posterity. To me, nevertheless, you ever present yourself as a beloved father or instructor putting forth his hands to bless.—Wherefore is my heart softened more than wont to-day? wherefore do I invoke your name more fervently now than usual? Because I am about to speak of men who consecrated their thoughts and their energies in life to pure humanity. With such a purpose before me, shade of Stieglitz! you will not take it amiss that I think first of you.

You possessed two qualities which are more rarely found united in the same practitioner than is commonly supposed, — genius and experience. Through this it was, unquestionably, that you possessed that admirable tact in prognosis; for Euripides, in his *Helena*, calls the union just alluded to the surest soothsayer; or as our own national poet*, speaking of Columbus, has it, that the anticipated land, had it not yet been, must needs have risen from the bed of the ocean to greet him on his westward course—in such intimate relationship does nature stand with genius; even so would you have created theoretical medicine had you not found it already extant.

But it is not my present purpose to speak of you in this direction; I would here and at this time only proclaim and indicate what prolific germs your wide-spread activity sowed in the moral soil.

The leading feature in your character, the love of truth, you fostered as philosopher by severe criticism, as man by intent and deed. With your inherent abhorrence of falsehood, of a lie in every shape, you had the boldness, where necessary, to call things by their right names, and, without regard to the assent or countenance of others, to give utterance to your intimate convictions.

As in the search after truth you always chose for yourself the shortest way betwixt the plan and its performance, so did you exercise towards others the difficult but indispensable duty of frequently saying No.

In your work *On the Conduct of the Physician at the Bedside*, you showed with as much clearness as kindness that the patient only profits by the consultation when his attendants agree in their views of the essential nature of his case, and are well inclined towards one another. The engraving which forms the frontispiece of Fritze's *Annals*, after Chodowiecki's picture, in which the sick man looks out from his bed with more than significance in his expression upon the three descendants of the Asklepiades who are intent upon their consultation, you always spoke of as true to nature; and you undoubtedly knew the epitaph on Hadrian's monument: *Turba medicorum perdidit Cæsarem*.

With the same untiring industry wherewith you strove to obtain independent views of all phenomena, and to gather arguments in support of your opinions, with like gentleness of spirit were you disposed to listen to the views and arguments of others. Your indulgence in judging of others, your excuses for all imperfections, infused respect and admiration, if they did not always bestow the ability to imitate you.

As there is no code of laws for the medical practitioner, you pardoned mistakes, but not readily injurious proceedings. Your own persuasion that the tables of the law which man received originally from God were occupied by but few commandments, you never forced upon others. You desired that the acts of the medical practitioner might be viewed as moral transactions, and rather to be prized in the purpose than in the effect.

As you made it a fundamental rule of action to depart no more in the affairs of life than of art, from the highest motives, so did you with increasing years withdraw yourself greatly from practice—a course that was not understood and was even falsely construed by many.

You were desirous, however, of leaving to younger talent a freer stage for the development of its capacities, and to dedicate the more unembarrassed hours of leisure thus secured to study and to writing. And I have myself had ample opportunity of knowing with what care and comprehensiveness you perused and criticised the works of strangers.

You still met the new proposals, the bright anticipations, of enthusiastic youth, with heartiness; into the minds of your younger brethren you poured sage advice, and set before them in attractive lights the goal to be attained. Each word you spoke sounded like a lesson, each lesson like an intimate conversation—indelibly did it sink into the soul; pregnant with future fruits did it there take root and grow.

Science and the land you served will ever hold your memory in honour; with me it will be cherished to my latest breath.

* Schiller.

RECORD OF CASES.

By THOMAS MAYO, M.D. F.R.S.

Physician to the Infirmary of St. Marylebone.

[Continued from p. 438 of Vol. xxxiv.]

The following cases may have some interest as illustrating the complication of thoracic with cerebral congestion, which was the subject of a former article contributed by me to the *Gazette*.*

G. Sharpe, aged 42 years, was admitted into the Marylebone Infirmary, April 17, 1844. He was well and rather strongly made, his hair dark, his complexion pale. His manner was confused and nervous, his articulation imperfect and uncertain: he seemed constantly drowsy; his only complaint was of pain in the head. The pulse small; there was some slight cough. He was at first examined in this latter relation only under the clavicles, and under both his breathing was excited, but perfectly vesicular. He could give no clear account of his previous illness.

April 19th.—*Sumat. Hydrarg. Chlor. gr. iv. statim. Misturæ Ætheris, c. Scillâ, ʒiiss. 6tis.* having been ordered by the resident physician on his coming in.

22d.—Pain in the head abated; in other respects he is unaltered. From this day to the 28th symptoms remained stationary. The above draughts were continued, and the action of the bowels maintained by *Pil. Ext. Colocynth. Co.* On the 29th the face became highly flushed, and the breathing quickened. The pulse was still of small calibre, and the action of the heart scarcely audible. The tongue had become brown and rather dry. He did not complain of any pain or uneasiness, but was as inattentive, unobservant, and inarticulate, as usual.

I directed *Cucurb. Cruentæ inter Scapulas ad ʒviij.; Misturæ Tragacanth. ʒiiss.; Potassæ Bicarbon. ʒj. 8vis.; Hydrarg. Chlorid. gr. ij. 6tis.*

May 1st.—To-day he is much more articulate, observant, and cheerful, and describes his head as greatly relieved. Some bloody sputa, like currant-jelly, are taking place. I observe that the right lungs posteriorly are duller than the left, and the breathing less vesicular; large crepitation in both. From

this day to the 7th of June large crepitation was observable posteriorly in the lower portions of both lungs, with deficient vesicularity and some dulness on percussion, at first principally on the right side, then on the left. There was little dyspnoea, and no pain, except, on the 22d of May, a sharp accession of pain under the left mamma, with deficient respiratory murmur in the neighbouring lung, and increased sound of the heart. This pain was easily relieved by six leeches. The pulse ranged generally at about 84. The tongue was coated in the centre. During this period of time a free expectoration of thick lumps of dark blood continued, and the visage became very anæmious. Meanwhile the mind became clear and sound, the drowsiness ceased, the articulation righted itself. Up to the 7th of June, the last-mentioned treatment had been continued, the calomel being reduced to one dose daily from the 17th of May. It was then discontinued, the mouth being affected. On the 14th of June, I find in my notes that the pallor had become extreme, but the sputa were then nearly free from blood, and slightly purulent. On the 22d, all appearance of blood had ceased. On the 3d of June, I should observe that a large blister had been applied inter scapulas with marked good effect.

The patient is still in the Infirmary (Sept. 17th), somewhat anæmious and weak, but free from complaint.

One most instructive part of this case I take to be the natural and unimpeded course which it followed during its earlier period; though in saying this I must myself plead guilty to some tardiness in discovering its nature, and controlling its progress.

As little was known of the case which I next adduce as of the above one, when it was received into the Infirmary, the 22d of February, 1844. It appeared, however, that the patient, Richard Woolley, a middle-aged man, had been intemperate. He had a sharp, excited, over-ready way of expressing himself and answering questions; his perceptions were clear; his mind was travelling from topic to topic with morbid rapidity, but not without a rational connection. He was restless in bed, and would throw about his own clothes and those of persons about him, so that it became necessary to put on

* Vol. xxxiv. p. 15.

the strait-waistcoat for a 'short time. His tongue or his hand were protruded with morbid readiness if either were asked for. He did not complain of pain. Leeches had been applied to him before I saw him.

On the 23d, I found him as above, with a tongue dry and red down the middle. His urine was reported to be sufficient in quantity; he had obtained no sleep since he came in; his pulse was small and low.

Sumat. Hyd. Chlorid. gr. ij. bis quotidie;
Liquor. Opii Sedativ. ℥ xxvi.; Mistura
Camphora Vespere, 3tis horis repetend.
donec dormiat. Strong beef-tea was
allowed.

On the 24th I found a small weak pulse; no sleep had been obtained.

I now was satisfied that the case must be treated entirely as delirium tremens, and ordered—

Porter, 1 pint statim.; Opii, gr. iss.;
Camphoræ, gr. ij. secundis horis donec
dormiat.

25th, meridiæ.—I found that after two of the above pills he had obtained much good sleep, but there was no improvement in any other symptom. The same principle of treatment was continued.

26th.—Much worse; struggling violently in the waistcoat, which had been unavoidably resumed. No sleep last night.

Pil. ij. supra præscripti statim, et 4tis horis donec dormiat.

But little effect. Death took place on the 27th. During the last two days brandy and some port wine had been given.

Autopsy.

Cranium: convolutions flattened. Tunica arachnoidea opaque in many places, and remarkably dry. Pia mater not much congested; substance of brain firm. Ventricles highly distended with fluid. Tunica arachnoidea, where it invests the lateral ventricles, opaque and rough.

Thorax: heart normal, but rather small; edges of aortic valves somewhat thickened; vegetations round the free edges of the mitral valves. *Lungs everywhere highly engorged, and full of miliary tubercles.*

Other viscera healthy.

The character impressed upon the

cerebral symptoms of this case by the intemperate habit of the patient, was that of delirium tremens. Meanwhile it may safely be affirmed that the tubercular and congested condition of the lungs, if it did not *cause* these symptoms, must have largely contributed both to their magnitude and to the inefficacy of the treatment adopted under them.

The vagueness of such terms as delirium tremens is to be regretted; but, in the present stage of our science, is not always avoidable. The above case is valuable as illustrating the superiority of that pathological diagnosis which is founded in structure, when it can be attained. Meanwhile it is to be regretted that our nosological systems are not so constructed as to distinguish those heads of disease which have this basis, from those which have not.

[To be continued.]

CASE OF HYDATID TUMOR OF THE LIVER; WITH REMARKS.

By SOMERVILLE SCOTT ALISON, M.D. Edin.

Licentiate of the Royal College of Physicians
of London, and Physician to the
Northern Dispensary.

(For the *London Medical Gazette*.)

MR. N., aged 75, native of Scotland, of middle stature, broad and well-formed, of melancholic temperament and sallow complexion, of very regular habits, sober and careful in his mode of life, was delicate and ailing from infancy. For many years he had suffered various dyspeptic symptoms. Some years ago he was supposed to be affected with gall-stones, but it does not appear that any were ever seen. About five years ago he was the subject of an acute attack of pneumonia, which it appears was overlooked for some days; soon after this, symptoms of diseased heart manifested themselves. Last autumn he suffered several severe paroxysms of pain, commencing in the back, running up to the face and into the teeth, and rushing down into the arms. The pain was accompanied with hurried respiration and copious sweating. The attack would come on instantaneously, and in the course of an hour or two pass en-

tirely away. The patient was in Edinburgh at that time, and was seen by different practitioners, but it does not appear that the nature of the paroxysm was understood. My respected friend Dr. Alison, of Edinburgh, at a subsequent period saw the patient, and regarded the case as one of hypertrophy of the heart, depending on disease of the aortic valves, with the usual complications of obstructed hepatic and cerebral circulation.

The patient came to town in spring, and placed himself under my care. He complained of much constant uneasiness in the abdomen, and of occasional pain over the region of the umbilicus. The liver was much enlarged, and descended much below the false ribs of right side; it occupied the whole umbilical region, and the edge of the left lobe could be felt extending along to the immediate vicinity of the left ilium. The epigastric region, together with the greater part of the left hypochondrium, was occupied by the enlarged viscus. The surface was even, except at the usual site of the fundus of the gall-bladder; at that point the liver projected, and gave the sensation of a tumor. Pressure did not produce much increase of uneasiness; percussion gave dull sounds, and a marked sensation of fluctuation over the point where the tumor was felt. When the fingers were dipped, as it were, into the liver, the fluctuation was most distinct. Little fluctuation was felt in any other part of the abdomen. The appetite was indifferent, but food did not create pain. The stools were bilious, frequently almost black, but sometimes they were pale. The bowels were inclined to be constipated, and required the occasional use of laxative medicine. Urine plentiful, alkaline, and deposited copious sediment of lithate of ammonia. The situs of heart preternaturally large, extending from 3d rib to 7th, and from the edge of sternum to a point an inch beyond the left nipple. The motion of heart was heaving and prolonged; the impulse much augmented. The first and second sounds were rough, but no bellows sound was heard. The pulse was not small, was hard, slightly intermittent, and 80 per minute. The veins of neck were distended; the external jugulars stood out in relief, and were nearly half an inch in diameter. There was dyspnoea to a

slight extent; he coughed occasionally, and expectorated mucus. The patient usually suffered from a degree of oppression in the head; in the mornings, just before rising, he experienced considerable headache, which would pass off during the morning. The pupils were considerably dilated.

June 6th.—The patient experiences much pain in abdomen: the abdomen is enlarging rapidly; fluctuation is felt in the right hypochondriac region; there is considerable œdema of the feet; pulse 110 and strong; tongue much furred.

Sumat. statim haustum c. Sulph. Magnesie, Tart. Potassæ, Tinct. Digitalis, et Tinct. Hyosc. confectum. Capiat necnon, Pilul. c. Scilla, Chloridi Hydr. et Ext. Colocynth. C. præparatum, mane et nocte.

7th.—Is still suffering much uneasiness in abdomen.

Detrahantur uncie octo sanguinis a dextro hypochondrio cucurbitulis cruentis.

8th.—Is much exhausted; skin covered with copious drenching sweat; much drowsiness; pulse 110, weak and irregular; complains of uneasiness in side.

9th.—Is much relieved.

15th.—Has continued tolerably easy, but has occasionally suffered pain in abdomen, which the patient likens to spasm. The veins of neck are less distended than before; the external jugular veins collapse at every inspiration, and become distended at every expiration, the distension beginning from below, and gradually ascending: the appearance is such as might be expected from inflating the vessel with air from below upwards, and is calculated to give the erroneous idea that the blood is slowly regurgitated into the vein from the thorax.

19th.—Has vomited much acid fluid.

23d.—Tongue and lips have within the last few days been covered with aphthæ.

29th.—Is much weaker; complains of pain in epigastrium; mucous membrane of mouth free of aphthæ, but red and irritable.

July 14th.—Has been very weak and uncomfortable; pulse very irregular; skin hot; tongue red; feet œdematous. Temperature of hand 93°.

16th.—Is very feeble; œdema of feet much increased. Urine red: speci-

fic gravity 1014; turmeric paper is rendered brown, nitric acid causes effervescence, and precipitates lithic acid; liq. ammoniæ gives no precipitate, and heat renders clear.

Aug. 2d.—Had been somewhat relieved the last few days, but was suddenly seized to-day with very severe pain in the abdomen around the umbilicus, and over the seat of the projecting part of liver. The respiration was hurried; the patient bent forward, and groaned. A dose of hydrochlorate of morphia, with sulphur. æther., was given, and in a few hours he was much relieved.

3d.—Has had a little sleep, and feels better; has had several stools of an ash colour; no gall-stones could be found.

5th.—Is sinking; large crepitation is heard all over chest; much yellow expectoration is coughed up. Pulse very feeble, but less intermittent than for some weeks.

11th.—Pulse very intermittent.

12th.—In endeavouring to sit up in bed to expectorate, the patient died this morning.

The treatment throughout did not aim at more than the palliation of the patient's sufferings, and the support of his strength. Three weeks before the death of the patient, Dr. Bright saw him along with me.

Sixteen hours after death the body was examined. Thorax: the pleura-costalis was intimately connected, by old adhesions, with the pleura-pulmonalis on both sides, but most extensively on the left side; there was no effusion in the pleural cavity. The lungs did not collapse on opening the thorax, and were emphysematous, particularly in the upper lobes. The upper lobes were darker than usual. There were several condensed hardened spots of a darkish hue, and within these spots were found melanotic tubercles, hard and resistant to the knife. The hardened parts had been the seat of inflammation. The pericardium was healthy, and contained the usual amount of serous fluid. The heart was greatly enlarged, and weighed nearly two pounds. The walls of left ventricle were much augmented; the cavity was not increased, and was filled with coagulated blood. The mitral and tricuspid valves were healthy, but the semilunar valves of the aorta were stiff

and almost immoveable, in consequence of much bony deposit. The margins of the valves were hard, and resistant to the touch. The aorta itself was free of disease.

Abdomen.—On laying open the abdomen, about ten ounces of serous fluid were found, the specific gravity of which was 1017. The omentum and stomach were covered over by the greatly enlarged liver. The colon was much displaced, and prevented rising from the caput cæcum to form its arch; it coursed across the abdomen, forming a concavity in the first part of its course. The cæcum was in its usual place, but greatly distended with flatus. The liver was greatly enlarged, and occupied almost all the upper part of the abdomen. The right lobe was of the colour of parchment, hard and globular; the left lobe presented the usual appearance of liver. The right lobe fluctuated, was tight, and felt greatly distended. The liver weighed nearly ten pounds, measured from the right extremity to the left 13 inches, and from the superior to the inferior margin at right lobe 7 inches. The left lobe was healthy; the peritoneal covering of the right lobe was thickened and rough; it was not adherent to the surrounding parts. The right lobe formed a globe; upon incising, vast numbers of hydatids, swimming in colourless glairy fluid, escaped, varying in size from a garden pea to a pigeon's egg: some of the larger hydatids were collapsed. Many hundred hydatids were found, and they, together with the fluid in which they floated, might have filled three pint bottles.

The right lobe of liver after being emptied of its contents proved to be perfectly hollow; the walls of the bladder, for such it was, were in no part above one-third of an inch in thickness; in the greater part of this extent, the walls did not exceed above a few lines in thickness: the anterior part did not reach above half a line: a long slip was preserved, and is now in my possession, the thickness of which on the whole is not more than half a line—about the thickness of a good kid glove. Very little of the proper liver structure was to be seen, and only in those few parts where the thickness reached a third of an inch. The liver structure was pale and unusually flaccid. The exterior of the cyst was rough,

uneven, of a greyish colour, not vascular. The solid remains of the right lobe including the cyst could not exceed four ounces in weight, but they were not put into the balance.

The gall bladder was empty, and diminished in size. The peritoneal covering of the abdominal parietes was healthy. The head was not examined.

The foregoing case affords many points for useful reflection. From the history of the case it is reasonable to conclude that hydatids had been present for many years in the liver. It does not seem at all improbable that the dyspeptic and bilious symptoms which the patient suffered ten or twenty years ago, arose from the hydatid tumor. It is more than probable that the paroxysms of pain which the patient endured several years since, and which were referred to the impaction of gall stones in the biliary ducts, depended upon the presence of hydatids in the liver, for it appears that no gall stones were discovered, although diligent search was made for them by a medical practitioner. This extended duration of the disease is of value in practice, as it warns us against rash or violent attempts at relief when the symptoms are not of a very pressing nature. Nor is the continuance of life under such circumstances calculated to cause surprise, when it is borne in mind that the hydatid tumor is less connected with malignant action than with a cachectic condition of body, and that it causes death rather by its mechanical operation on the neighbouring parts, than by any morbid action of its own.

The current opinion that the hydatid formation both in man and in the lower animals is connected with a cachectic condition of the body, is confirmed by the history of this case. We learn that the patient had been delicate from infancy; that he had never enjoyed robust health; that after attaining to manhood, through a sickly youth, he was afflicted from time to time with bilious and dyspeptic disorders throughout a long life. Perhaps the presence of the melanotic tubercles in the upper lobes of the lungs may be regarded as a further proof of the cachectic condition in this patient. For my own part, I regard them as evidence of such a condition, rather than of a malignant diathesis.

It is important to know that the

patient was exposed to those forces which are known to favour the formation and growth of the cachectic condition. Having spent his infancy and early youth in Scotland, he was reared chiefly upon vegetable and farinaceous diet: no doubt the oatmeal porridge, which enters so largely, and therefore so prejudicially, into the diet of the humbler classes of Scotchmen, assisted in the formation of the cachectic condition. In early manhood he came to London, and for about half a century, struggling with indifferent health, he, like many of his countrymen in this metropolis, led a life of unceasing toil, scarcely relaxing to partake of the necessaries of life, and labouring on, after having, in the capacity of a workman, realized a sum with which many master-tradesmen would rejoice to retire from business.

The almost total destruction of the right lobe of the liver is a remarkable feature in this case. The writer is not aware that any case is recorded in which so large a portion of the liver was destroyed. He has not met with any recorded cases in which the right lobe was, as in this case, totally converted into a bag or cyst, but his countryman, the late Dr. Matthew Baillie, has given the history of a hydatid tumor of the kidney, the kidney being converted into a "bag" containing three pints of hydatids. No obvious poisoning influence from imperfect depuration of the blood in the liver was present, and it appears that the duties of the annihilated right lobe of the liver had been effectually performed by the other parts. It is, however, possible that the depurating process might not be *perfectly* performed, and that the dark condition of the upper lobes of the lungs, and the melanotic tubercles formed there, were connected with the morbid condition of the biliary organ. The obstructed circulation consequent upon the disease of the heart is sufficient to account for the oppression and pain of head which the patient frequently suffered, and renders it unnecessary to refer these symptoms to an impure condition of the blood. That the biliary secretion was formed in not very deficient quantity is proved by the colour of the stools, which were sometimes dark, and though sometimes light, were never destitute of bile.

I have mentioned in my report that

the paroxysms of pain which the patient frequently suffered were not unlike the paroxysms experienced during the progress through, or impaction in, of gall-stones in the biliary ducts. This resemblance has, I perceive, been pointed out by other writers. Dr. Kerr, in his able article on Hydatids, in the Cyclopædia of Medicine, says:—Occasionally the same effect is produced as when a calculus is passing through the gall-ducts, viz. violent spasmodic pain at the epigastrium, frequent vomiting, with an unaccelerated pulse, and sometimes jaundice alternating with intervals of good health. Although the resemblance is great, still, when the two paroxysms are carefully compared, some points of distinction are to be made out. In the case of gall-stones, the irritability of stomach and vomiting I have found to be almost invariable attendants; there has generally been jaundice to a greater or less degree, with white stools and bilious urine. Several, if not all, of these symptoms may doubtless attend some cases of hydatid tumors, but they are not essential, and may be absent. In the case I have recorded none of them were present. In the case of calculus, the stools suddenly assume a bilious aspect after the cessation of the paroxysm, not so in the hydatid paroxysm. The situation of the pain in the above case was different from that in calculus; the pain in the case above related commenced a little to the right of the umbilicus, coursed up the back to the shoulders and the head, reaching the teeth, and rushing down into the arms. The character of the pain may not be the same in other cases; still, it is proper to note the points of disagreement between the account of the paroxysm given by Dr. Kerr, and what was observed in this case, especially as it may assist materially in enabling the practitioner to distinguish between hydatid tumor and gall-stone, disorders which a non-professional person would not wish to be confounded by his medical attendant. In the case recorded there existed another point of difference; the pulse was accelerated, being as high as 120 per minute. The pain seemed to me to be fully more severe than what I have remarked in cases of biliary calculus, and decidedly less remitting.

It has been mentioned in the report

that the fluctuation was most distinct at the region of the liver; it might be inferred from this that the fluid whose movement was felt was the fluid in the liver itself. This was not the case, no fluctuation was felt in the liver; but the movement of fluid between the abdominal walls and the anterior surface of the liver was well ascertained, and much more distinct than I had ever before felt it, in no inconsiderable experience. The fluctuation being more distinct at that part than at any other of the abdomen, arose from the absolute resistance which the extended and very hard liver offered to the retreat of the fluid under the hand. The liver felt as resistant as a board. It is important to attend to this fact, as it may assist in the diagnosis in future cases, and the more especially since it is placed as a diagnostic sign, in the article on Hydatids, in the Cyclopædia of Practical Medicine, that the tumor, "if it should consist of hydatids, will generally feel to a certain degree soft." The opinion that the liver was hard was verified by inspection after death, for it felt as tight and hard as a drum; and so distended was the tumor that even out of the body the fluctuation was not particularly well-marked.

The extreme tenuity of the parietes of the cyst is a striking feature in this case. In several parts of the tumor the thickness of the containing sac was not greater than that of a lady's kid glove. Such was the only partition between the immense mass of hydatids and the abdominal cavity. Hence there was considerable risk of rupture into that cavity, and the sudden occurrence of alarming symptoms. The danger from this source was not diminished by the presence of abnormal adhesions between the liver and the adjacent parts, such as are often found in cases of abscess of that organ. There is much reason to believe that had the patient survived many weeks longer, effusion would have taken place into the abdomen, and caused excruciating agony. It is interesting to observe that so long back as the time of Hippocrates, this accident and its danger were not unknown. He says, 'Οχοσοισίν ἂν τὸ ἥπαρ ὕδατος πληθὲν εἰς τὸ ἐπιπλοὺν βαγῇ, τοιτεοσιν ἡ χοιλίη ὕδατος ἐμπιμπλαται· καὶ ἀποθνήσκουσιν.—*ΛΗΗΟΝ*.

The diagnosis of this disease is comparatively seldom made out, except when the hydatid formation is dis-

charged from the body, and then the diagnosis is at it were effected for us. The importance of great attention to the diagnostic characters of the disease, on the part of students and young practitioners, cannot be denied. The utter impossibility of detecting the hydatid tumor, as such, without careful examination, and comparing its characters and the patient's symptoms, history, and condition, with the characters of the various diseases with which it may be confounded, must be acknowledged. Were proof wanting on this head, it would be sufficient to refer to the paucity of cases in which where there had been no discharge of hydatids during life; the nature of the disease had been pronounced before examination after death. There is no doubt difficulty in the way of a correct diagnosis, yet that difficulty may be overcome, and its presence, far from daunting the medical practitioner, should fire his energy, knowing as he must that the more he effects the more he merits, and the more he will ultimately attain. "*Tu ne cede malis; sed contra audentior ito.*" When the disease has been of long duration, when it is connected with an obvious cachectic condition of body, when the surface of the tumor is smooth, and especially where obscure fluctuation is perceived in the part, hydatids may be suspected. Scirrhus of the liver may be suspected when there is a decided cancerous character in the family, when the tumor is of moderate size, uneven on its surface, and when the symptoms of constitutional disturbance are of an acute character; the diagnosis will also be materially assisted by the presence of cancer in any other part of the body.

The presence of medullary sarcoma may be inferred when the tumor is of rapid growth, when it is soft, when there is much constitutional disturbance, and when encephaloid disease is, or has been, observed in any other part of the body.

Hydatid tumor of the liver may be distinguished from the enlarged liver depending on congestion, and arising from disease of the heart by the peculiar characters of the tumor already given. The congested liver is connected with disease of the heart; the liver is simply enlarged, and is not accompanied for the most part with severe symptoms,

such as we meet with in hydatid tumor.

Many remedies have been confidently recommended for the cure of hydatid tumor in the lower animals. The removal of cattle from wet to dry pasturage, it has been asserted, has cured the distemper. The same thing has been said of change of diet, as from succulent food to dry grain and fodder. These means, we believe, however judicious and useful, have not cured the distemper, but only arrested its further rapid extension. It is true that Jenner maintained that the disease could be produced at pleasure in the rabbit by feeding him on succulent food, and it might be concluded that the disease could be cured by an opposite kind of diet, on the principle that with the cessation of a cause the effect will cease. But we are disposed to question the correctness of Dr. Jenner's statement; the feeding of rabbits on succulent diet does not generally lead to the formation of hydatids. Moreover, if it did, it is extremely doubtful that the cessation of the cause would remove the disease. It might certainly arrest its further progress, but it could not remove a hydatid tumor already formed, any more than a good diet will remove a tubercular formation in the lungs caused by deficient nourishment.

Much, too, has been said of the utility of common salt, turpentine, broom tops and digitalis, when exhibited to sheep affected with hydatids, but it requires no profound knowledge of the nature of the disease to suspect that the chief results of their exhibition have been palliative only, and not curative.

Dr. Kerr suggests, that in the treatment of the disease in man we would do well to take a hint from the treatment pursued among the lower animals. I certainly agree with him, if he intends to confine his recommendation of these remedies to that moderate extent in which they may be safely employed as palliatives or arrestants. To administer violent and poisonous agents, however, with the view of destroying hydatids in the human body, or of causing their absorption, I regard as very questionable treatment. To tear up, as it were, the very vitals of the system, and fritter away the resources of the constitution in a vain and necessarily fruitless effort, is worthy of all condemnation.

While it appears that no medicinal or dietetic plan of treatment offers any reasonable probability of curing the hydatid, it is no less certain that nature, taking as it were upon herself the duty of the surgeon, has, by means of those powerful and effective actions, those primary levers in the surgeon's hand, viz. adhesive or plastic inflammation and ulcerative absorption, effected the complete eradication of the disease. How often have hydatid tumors which had long oppressed and fretted the suffering patient, and which threatened ere long to put a period to his sufferings by death, been cured by the hand of nature—how often have immense hydatid collections been discharged by the lungs, by the stomach, by the bowels, by the urethra, and by the surface of the body, and the released patient permitted again to enjoy the pleasures and discharge the duties of this life? Many such cases are on record—cases cured by the hand of nature, while medicine, impotent, has but looked on. But we cannot in all cases depend upon a natural expulsion; in many doubtless there is no effort made, and in many the progress is so slow that the patient expires before its completion. Again, the expulsion may take place into the abdomen. Doubtless many go down to the grave under such circumstances. Would it not be well to imitate the course so successfully adopted by nature on many occasions, at that season when the life of the patient becomes endangered, and produce an artificial outlet? It is true, that such procedure has been already adopted, and with success. So long ago as the year 1691, Dr. Tysons published an account of a girl whose side he caused to be opened a little below the short ribs, “whence issued out abundance of limpid water; but what was most surprising, together with it a great many hydatids, that first and last we guessed there might come out about five hundred of these bladders.” When he wrote, “the patient was still living, and enjoying her health better than all her lifetime before.” In this case it is uncertain whether the hydatids were in the liver or in the peritoneal cavity.

When the tumor can be distinctly felt, when fluctuation is discovered, and there are present the other symptoms

and circumstances indicative of hydatids, might not an artificial outlet be formed through the walls of the abdomen? There are, of course, objections to this course, amongst which may be placed, the uncertainty of the diagnosis and the danger of peritonitis. It has been already shown that with minute attention to the case the diagnosis may be made out with tolerable certainty, and it is probable, with future experience, less difficulty will be experienced. But in order to be assured of the nature of the disease, the tumors might be explored by a hollow needle capable of removing a specimen of the morbid formation. In the case of hydatids we would obtain serous fluid, which perhaps on minute examination may be found to possess characters diagnostic of it from common serous fluid: in the case of abscess we would obtain pus, and in that of cancer, cancerous cells, visible under the microscope.

48, Gower Street,
Sept. 27, 1844.

ANALYSES AND NOTICES OF BOOKS.

“L'auteur se tue à allonger ce que le lecteur se tue à abréger.”—D'ALEMBERT.

The Retrospect of Practical Medicine and Surgery; being a Half-yearly Journal, containing a retrospective view of every discovery and practical improvement in the Medical Sciences. Edited by W. BRAITHWAITE, Surgeon to the Leeds Eye Infirmary, &c. &c. Vol. IX.—January to June, 1844.

THERE can be no doubt of the usefulness of such books as this, the title of which has just been read. When we turn over its leaves, however, short way as the time lies behind us which it purports to survey, a feeling of melancholy takes possession of our mind; we seem as if we were treading among the graves of the dead; evidences of previous life and motion meet us everywhere, but alas! in many cases the life has fled, the motion has come to an everlasting stand-still.—We do not mean to say by this that there has been anything like a particular murrain among our friends and acquaintances, and that it is the narrow heap covering their dead bodies that we encounter; it is but the tomb of their ideas, their

discoveries, their noble efforts to take the edge off the fell scythe, and the point off the deadly dart, that we meet as we wander through Mr. Braithwaite's *Retrospect*. Some two centuries ago, Theophile Bonnet, or Bonetus as he was called, a physician of note in his day, published an enormous folio volume, under the somewhat startling title of *Sepulcretum*, or the Burying-place. Morgagni followed essentially in the same track as Bonetus, in his celebrated work, although it came forth with the happier designation of a treatise on "The Seats and Causes of Disease." These great men may therefore be said to have provided tombs for the patients they attended: practitioners in the present day, and what are called practical men in England especially, show little or no disposition to find mausoleums for those that trust them; to hear our medici, it would seem that each had discovered the elixir of life in the particular case or class of cases he describes, and that his patients all became possessed of immortality through his means. The patients do not die then; but the reputation of the means which in the hands of the original proposers were sufficient to save almost all without exception, seem to come to speedy end.—One might write a *Sepulcretum* of therapeutical means in the present day. Nevertheless, discouraging as is the backward view of methods and means of cure which always meets us, we would not, we dare not, be ignorant of our want of success; and a large measure of this negative information we always obtain by turning to such books as the *Retrospect of Practical Medicine and Surgery*.

Mr. Braithwaite's is, so far as we know, the only attempt that has yet been successfully, and for a series of years, made in this country, in surveying the brief past with reference to matters of practical medicine. Our German neighbours have long been in possession of more than one work of this kind in their "*Jahrbücher*," and "*Repertoriums*." We remember, indeed, with regret, that it was not regularly continued, the excellent retrospect of medicine and surgery which used to preface the volume of the old *Medical and Physical Journal*, in the days when the apathetic medical public were content to have their latest information the 1st

of every month. We ought also to mention with respect the excellent reports that have lately from time to time appeared upon particular subjects both of scientific and practical medicine in the pages of our cotemporary, the *British and Foreign Medical Review*. But Mr. Braithwaite's is the only disjunct and separate retrospective medical review that has ever gone beyond a single number or volume: he has reached the 9th volume of his laborious undertaking—laborious we may well call it, aware as we especially are of the vast amount of application and pains which each of his volumes represents.—We trust that it will continue to appear for many years to come.

The work is really what it purports to be, particularly with reference to the literature of British medical periodicals; but as in one or other of these almost every work of any importance, whether British or foreign, is sure to be mentioned, and as Mr. Braithwaite does not by any means confine himself to selections from original communications, but also culls from critical and analytical notices of books, his work virtually becomes a kind of digest of the practical medical literature of Europe. We have but one fault to find with Mr. Braithwaite, and it is for the way in which he presents us with the results of his labours. It seems to us that something more than mere arrangement under the comprehensive heads of "Medicine," "Surgery," and "Midwifery," could be almost as easily accomplished, as the jumble, without method or sequence, which meets us from beginning to end of each of the sections. The first article, for instance, under the head of Practical Medicine, in the 9th volume, is on the Diagnosis of Empyema; the 2d is entitled Remarks on Urinary Disease. Under the head of Surgery, the first article comprises a review of some of the most important subjects treated of in the late lectures of Sir B. Brodie. Here, perhaps, arrangement was not very possible, nor yet very necessary; but a miscellaneous article need not have been followed by "Remarks on the treatment of Vesicovaginal fistula," nor that by one on the treatment of Entropium and Trichiasis."

The first article in the Midwifery department is "On the Effects of Ergot of Rye on the Fœtus in Utero;" the second on "Puerperal Fever;" the

third "On the Extirpation of Diseased Ovaria." It would be every whit as easy for Mr. Braithwaite to arrange his materials in something like a sequence; to place the diseases in the order of Cullen's Nosology, at the least, or according to the system or systems of the body which they implicated; or, perhaps as good as any thing, to place them alphabetically. We beg to suggest a natural arrangement to Mr. Braithwaite, for his next volume. He might arrange diseases that were referrible to no particular system, but which implicated all, such as fever in its various forms, to one head; then he might have a head to include diseases produced by specific poisons, such as syphilis, glanders, hydrophobia, &c. In another grand division he might have diseases which affect the ultimate structure of the various organs of the body, and which tend to engender new tissues, such as Cancer, Tubercle, Melanosis, &c. He might then connect each of the special diseases with the particular system of which the organ affected forms a part: what so natural, for instance, as to arrange all the diseases of the chylopoëtic organs into one harmonious group, *ab ore ad anum*? beginning with the lips, teeth, tongue, and fauces, and passing on to the stomach and intestines, liver, spleen, pancreas, &c. How easy would it be to bring all the diseases which affect the thoracic viscera into two harmonious groups, connecting with the one all the diseases that have their seat in the air-passages and lungs; with the other, all those that implicate the heart and pericardium, the arteries, the veins, the lymphatics, and the lymphatic glands, and with this, farther, to connect morbid alterations of the circulating fluid. The diseases of the brain and nervous system, again, form a most natural family; so do the diseases of the kidneys and of the skin, which are now viewed as the especial depurating organs. Finally, the diseases of the male generative system form one natural family, and the diseases of the female generative system form another. The trifling objection which we have raised to Mr. Braithwaite, is, however, and after all, one merely of form: each volume is provided with an excellent index, so that every article it contains can be referred to without difficulty; and in the 9th volume, now before us,

we are happy to find a general index to the contents of the first eight volumes of the work. With such ample means of finding out every thing the work contains, arrangement becomes of secondary consequence, though we still think it desirable. Were it even less to be desired for the reader's sake than it is, we venture to suggest it to the laborious author himself as a means of deriving a greater amount of satisfaction from his work than he has yet obtained. It is nothing that the statuary moulds a beautiful head, a fine bust, and graceful limbs, apart from one another; he must put them together into one harmonious and proportionate whole, and then, and only then, does he feel the thrill of exultation and delight that flows from forethought and design successfully shown forth in fact. The dissipated and the gay talk of their pleasures,—they are nothing to the joys which the true student feels in his quiet chamber. We know Mr. Braithwaite must be a happy man, because he must needs be an industrious man; we offer him a means of additional gratification in the coordination and arrangement of the materials which his knowledge and judgment lead him to select as worthy of a place in his pages. We very heartily recommend our readers to possess themselves of his unpretending volumes.

MEDICAL GAZETTE.

Friday, October 4, 1814.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

OUR NEW VOLUME.

THE LONDON MEDICAL GAZETTE has now appeared regularly for the period of seventeen years. Always in the hands of gentlemen who have not only been members of the medical profession, but practitioners themselves, it has been the unvarying advocate of all that is respectable in the profession of medicine and surgery, the science and practice of which it has ever sought to advance, by bringing

light, never by casting shadows ; it has sought rather to raise all to the level of those who by the accident of fortune, or position, or superior talents had achieved the highest places in the profession, than to pull these men down to the lowest levels. If mistakes have ever been commented on in its pages, it has only been that a beacon might be fixed on some sunken rock or shoal, not that those who had made shipwreck there might be gibbeted and exposed to scorn, and the confidence of the public shaken in all through the error of the one.

Uncertain of the character and convenience of any new structure that might be raised, the *MEDICAL GAZETTE* has still advocated the propriety of maintaining the old professional tabernacles in their integrity ; of mending and enlarging them, not of demolishing anything and building up anew. The profession has proclaimed all over the country that it approves the prophetic misgivings of the *MEDICAL GAZETTE*.

In one word, the *MEDICAL GAZETTE* will proceed in its course of unfettered criticism, both on the letters and the politics of the medical profession, meddling as little with the latter as circumstances will permit : what appears in the shape of quackery and false pretence it will denounce ; what comes forth in the guise of true science it will cherish and uphold. Old friends promise their unabated support, and the volume just commenced it is confidently anticipated will not fall short of any of its predecessors in scientific interest or practical utility. Whilst we shall meantime keep clear of any long and systematic course of lectures, we still propose to give several shorter incidental courses, and occasional essays in the form of lectures, by which variety will be secured and much valuable information given. The medico-political storm in which we have lately been engaged

must by and by blow over, and we shall then be left at liberty to revert in our weekly articles to the subjects that are of permanent and peculiar interest in our profession—the ethical, the educational, the practical.

THE COMMENCING MEDICAL SESSION.

THE admirable Discourse which heads this number leaves us little to say in the way of counsel and caution to those who are now entering on their career as students of medicine,—a serious business, and full of importance, as understood by older heads ; only lightly thought of by the ignorant, the giddy, and the young. Our friend Dr. Lee has presented the student with the glass in which he ought to look at himself, not only every day, but every hour of the day. No higher pattern can be proposed for imitation than Dr. William Hunter ; the influence of accomplishment, the fruit of untiring application, was never more brilliantly illustrated than in his complete success, and the signal influence he was enabled thereby to exert on the progress of the art and science of healing. Without his attainments as a liberal scholar, Dr. Hunter would not have been chosen to fill the place of tutor in Dr. Douglass' family, and without this appointment he would not have remained in London, not only signally to advance the most useful of all the sciences to mankind, by his own efforts and contributions, but to mould the clay, and to breathe the breath of life into the statue which he fashioned, and finally presented to the world as John Hunter, the glory of British surgery, the greatest comparative anatomist and profoundest physiologist the world has seen since the days of Aristotle.—Without the liberal elementary education, unquestionably wrang in great measure from adverse circumstances by his own indomitable

will, Dr. William Hunter could not have taken the subordinate office which finally inducted him into the distinguished position of leading physician in the metropolis of the world; he must have returned to his village, and there probably would he have lived his day—unnoticed and unknown.

We have said that the study of medicine was a "serious business," and so in sooth it is; but it is also a delightful one: the whole realm of nature is its subject, and the accomplished physician and surgeon are in the end but the interpreters and ministers of her laws—they create or originate nothing; the business of their early lives is to learn these laws, that of their riper years to apply them. The period of two or three years usually devoted to the study of medicine, the tyro ought to be aware is but as so many months or days in comparison with the extent of science necessary to constitute the accomplished practitioner. Let the student make the most of his brief time, then, and neglect no opportunity of informing himself on the subject of his profession. With diligence he can easily master all, and much more than all, that is required of him to pass his examinations, and to obtain his license to practise.

The habit of application is just as easily formed as that of idleness and dissipation; the true student grudges any interruption to his studies even as sincerely as the idle and dissipated man does any interruption to his idleness and dissipation. The pleasure that flows from mental occupation is at least as great as that which flows from frivolous amusement or sensual indulgence; and it has the infinite advantage, that it not only leaves no sting behind it, but that it brings both profit and reward. "Who," exclaims the poet, "of all the noisy train that fluttered round me once, clung to me to the last? Thou, friendship, with the

gentle hand, and *occupation*, thou." "The best present which God has made to man," says a French philosopher, "is the necessity of being occupied." We beseech our young friends to keep this great truth ever present to their minds: let them go on steadily day after day, week after week, without haste, but without a pause, and the month and the year will surely find them better and wiser men than they were before. In the end they will be able to present themselves upon the list of candidates for reception into the medical profession, without misgivings of success, and without the pangs of self-reproach for neglecting opportunities, and time misspent, which the idle and the dissipated never fail to suffer. They will be able to offer themselves with manly confidence for examination upon the strength of what they have themselves learned by diligent application through the whole term of their studentship, not with mistrust and a sense of humiliation, confiding in what they have crammed in the course of a few weeks or months through the degrading process of grinding.

MOVEMENT IN THE PROFESSION.

Writing the few lines that precede has carried our mind back to our own happy student's days, and wakened notes whose very sweetness unfits them to combine in the rough and often discordant combinations that make up medical politics. We begin, in fact, to be weary of the sameness of the song that is everywhere sung: our friends all over the country have but two, or it may be three, fundamental resolutions, which they still enforce in nearly the same words,—the necessity of protection to the profession against quackery, approbation of the Court of Examiners of Apothecaries' Company, and perchance thanks to the Editors of

the *Times* and medical journals for their advocacy of their cause. The demonstration against the Medical Bill, in its present shape, has been quite unequivocal; what the profession would have in its stead is much more questionable: we have numerous letters and suggestions on the subject, which we have not the courage at this moment to consider and comment upon, but which we shall, of course, revert to by and by. Meantime, and by way of winding up our notes of the movement in the profession, unless we come upon anything that is striking or new, we shall print a petition to the House of Commons, that was agreed on at a highly respectable meeting of medical practitioners,—physicians, surgeons, and apothecaries—held at Rochester on the 27th ultimo. This petition sheweth,

“That although your Petitioners regard with satisfaction some of the clauses contained in the proposed Medical Bill of Sir James Graham, yet on the whole they view it with disappointment,—disappointment and alarm; for while it professes to protect the medical profession and the public health, they believe it to be directly and seriously injurious to both.

“That your Petitioners are of opinion that the Act passed in 1815, and called the Apothecaries’ Act, has tended much to elevate the character and protect the interests of the General Medical Practitioner, and to secure sufficient medical attendance to all classes of society. That the abrogation of this act, in the present state of the law regarding the medical profession, would, they believe, prove a serious injury to the members of that profession and to the community at large, the real interests of both being inseparably connected; and thus they think ample security should be afforded against all unqualified practitioners, and feel great regret that the proposed Bill contains no clause to such effect.

“They therefore humbly and respectfully pray of your Honourable House to give to the proposed Bill your most serious and mature consideration, and not to pass it into a law in its present form.

“And your Petitioners will ever pray.”

MEDICAL REFORM BILL.

To the Editor of the Medical Gazette.

SIR,

CONJOINING with many of my professional brethren in testifying my thankful sense of your able and judicious analysis, and tendency of the proposed bill of Sir James Graham on Medical Reform, I beg to trouble you, and, if you think fit, your readers, with a few observations on this, at present, engrossing subject. No doubt you are amply supplied with several gratuitous communications relating to the Bill in question, and have recommended to you as many modes of supplanting or amending its several clauses—showing that what is remarked of men and opinions in general, much more might it be said of our order, *tot medici, tot sententiae*. The observations, however, of one who has gone through the several grades of the profession, both in public and civil practice, may not, perhaps, be unacceptable, and be considered somewhat in the light of experimental acquaintance with the workings and wants of the profession, especially in the provinces.

The Bill of Sir James Graham contains three principal enactments, upon which, it may be said, all the rest of the other clauses depend for their operation and detail. These are—1st, the creation of a Board of Health to consist of 18 members; 2d, the abolition of the present Apothecaries’ Act; and 3d, the registration of all regular practitioners.

We must give the Home Secretary due and worthy credit for his desire to establish this Central Board for to control, systematize, and equalize, the *curricula* of medical education throughout the sixteen or eighteen *dejecta membra* of our universities, colleges, and corporations, now all acting as independent sources of education and honours, and conferring titles and privileges of unequal repute, jarring with each other, and, from time to time, giving rise to much ill-will, invidiousness, and legal injury, among the general members of the profession.

The formation of such a Board seems therefore to be the main pillar in any reconstruction of the profession; and it was natural that the architect, who may also call himself the proprietor, should form this pillar after his own *order*, and irrespective of the taste or wishes of those who were to enter within the precincts of the structure when completed.

In your late leading articles you have stated some powerful objections to the structure of this part of Apollo’s new temple; or, in plain words, how the liberal show of eighteen members of the Board, representative, medical, and lay official, will be divested of any

practical power or control, and be soon absorbed into a plenary quorum at the Home Office. There is nothing to prevent this, if designed; but if not, convenience, love of peace, and respect to governmental authority, will bring it about.

Instead, then, of a Board liable to such tendencies and objections, and to found its basis upon some show of representation, it should rather be composed of a medical representative from each of the Universities, Colleges, and Medical Corporations in Great Britain and Ireland, that are empowered to grant degrees, diplomas, and licenses to practise medicine and surgery; the rules and bye-laws of this Board to have always the approval of the Lord Chancellor for the time being before they can be issued or put into execution.

The principal office of this Board should be to establish a uniform course or curriculum of study throughout all the seminaries of medical and surgical education in the three kingdoms; and all degrees, diplomas, and licenses emanating from which to have corresponding privileges to practise equally in any city, town, or other parts of Her Majesty's dominions, without let, fee, or hindrance.

The second principal object of the Bill is the abolition of the present Act of the Company of Apothecaries, without the substitution of any enactment of similar legal import of protection to the regular, and of restriction on the irregular practitioner. As this is really proposing a most important change in the polity of the profession, no wonder it has excited much alarm, and stirred up universal reprobation throughout all its ranks and degrees. Viewing, however, this subject in a practical bearing, it is quite a question whether the profession will suffer more from this *free-trade* system than they do at present from a protection that is merely nominal or inoperative, and altogether deceptive. I need not bring forward any proofs of this—he that runs may read them in the hosts of irregulars, quacks, and doctoring druggists, that abound with barefaced impunity in every town and village of the empire. It may have the show of some protection to the licentiate of the Worshipful Company to know that the sword of Damocles hangs over the head of all those practising outside the pale, but assuredly the “pharmacopolæ, mendici, mima, balatrone, et hoc genus omne,” have no such terrors. They know that this sword of the law hangs not by a hair, but by a multitude of cords; while its suspension in any wise proves often an injurious and an insulting check to the otherwise more amply and more honourably qualified member of the profession. Not satisfied with the present delusive protection,

I am sorry to see that the over-weening desire of many members of the profession to enforce their privileges, is making them cry out for summary penalties against all and sundry intruders and regular practisers of medicine. This clamour for restriction will never gain any support or sympathy from the public; on the contrary, it will place us in a more invidious position, for every sacrifice is expected from the profession—time, money, charity, physical comfort, and relinquishment of all public or political status. To assert any thing like protective rights, or enforce any fiscal penalties, would not be endured. We must yield. To carry into force any prohibitory enactment of this kind would be to close up the great bulk of the chemists' and druggists' shops throughout the kingdom. These ready retailers of advice and medicine are the physicians and surgeons of the lower classes; they can fee no higher grade; they are, from poverty and convenience, compelled to go to these minor oracles without the gate; for the pulling a bell, or lifting a knocker at a consecrated door, implies a deeper pull at the bottom of their purses than they can afford.

We must, then, either permit chemists and druggists to play with disease and death over their counters, or a lower or subordinate class of practitioners must be licensed, similar to the former humble apothecary, or the pharmacien of France. It may be a *lese majesté* against science and the profession, to say, that the present growing race of professional men are too highly educated; but so it is, as far as the great masses of the poor and working classes are practically concerned. They will have a doctor suited to their own wants, feelings, and ability to pay him. In fact, the rising profession has, in education, habits, and, we may say, in honourable ambition, outstripped the under sluggish, if not retrograde current, of lower society. Their adaptation to each other is becoming every day less reciprocal, and it is only through the halls and waiting-rooms of hospitals and dispensaries that they mostly come in contact; but there it is with humiliation on one side, and with a sense of sacrifice of time, or of condescending benevolence, on the other; while there is little of “*ab eo curari, a quo volunt.*” It may therefore be concluded that it is very immaterial whether the penal part of the Apothecaries' Act be retained or not; while it would be inconsistent and intolerable to public sentiment to enact any prohibitory laws of a penal nature to put down irregular practice or quackery.

The third principal head of the proposed Bill—the registration of all regular practitioners—may be held a wise and useful measure, though it is delusive and onerous in

its intended administration. It gives a show of privilege and exclusive protection to the regular practitioner, but nothing more than he at present enjoys. The governors and trustees of all medical institutions throughout the kingdom do already elect no medical officers but such as are duly qualified. This wise and palpable rule requires no Act for its enforcement, which would be no boon nor protection to the regular practitioner, nor any bar or prohibition to the irregular one in what he wants—practice that *pays*, not that *honours*.

As to the evidence or certificates of registered practitioners being alone received in Courts of Law, this will easily meet with its value, when we know that the great majority of medical men in any respectable practice rather avoid than court these occasions of professional duty, and it would be rather a privilege to them to be debarred from these forensic exhibitions. This part of the Bill, even if it were an exclusive boon to them, will be very apt to be at times frittered from them; for cases may easily be conceived where the medical evidence of a long-practising irregular, of a sound and sober mind, cannot, for the ends of justice, be rejected.

As much may be said of the value to the registered practitioners, of being alone, in opposition to the unregistered, able to recover his account of charges at law. This is speaking with an uncertain sound; for at present physicians cannot recover in law their fees; yet do they suffer? And assuredly, for every account a surgeon or apothecary recovers in a Court, he may reckon to lose more than double its amount among those who either are or would be his patients; for medical men must endure all things without repining.

The proposed mode of registration is, however, directly onerous and sumptuary without any equivalent protection, while the law will protect the right of a patent medicine after receiving the duty for the privilege of selling it. And really, to raise a considerable sum of money from the regular profession, without any *quid pro quo* of effective privilege or protection whatever, is certainly much more than the wildest reformer among us ever dreamt of; and will make us adhere with unwilling tenacity to our ancient ways. Registration is, however, very desirable; but let it be simple, untaxed, and satisfactory. Our diplomas might be sent in to the Town Clerks of cities and boroughs, or to the Clerk of the County wherein the practitioner for the time resides, on the presentation of his degree, diploma, or license, and this at the expense of a fee not exceeding £5 in any case. These local registers would be revised by the Central Board or Council, and the revised list printed each year, the

original list being open to the inspection of all and sundry, at the respective offices of the said registrars, and only those whose names are therein registered to be entitled to claim any of the rights, honours, or privileges, of the profession.

Though much more might be remarked by me on the fertile subject of this Bill, so full of hard and indigestible bits, though larded over with some savoury morsels, yet as it seems designed by its author to undergo a long and repeated rumination, before any thing like a wholesome and comfortable digestion will take place, I may take another occasion of intruding upon you the better concocted observations of

AN OLD PRACTITIONER.

September 16th, 1844.

VISIT TO SALERNO.

No medical traveller visits Italy—or ought to visit Italy—without seeing Salerno, whose situation and climate seem to have given it medical supremacy in the beginning of the 12th century My guide to the University was one of its Professors, who seemed disposed to show me every attention. Though charged with the duties of one of the principal chairs of medicine, he did not live in Salerno. He only came at the hour when his three or four pupils required his presence, and discharged his function as quickly as possible; he strode his mule, and returned to his household gods in the country, where I imagine he gave no farther thought to physic, for his farm required the greater part of his time.

The university where theology, law, and physic, live peaceably together, rises midway upon the acclivity on which Salerno is built. The building has nothing of the antique or striking with which imagination loves to encompass the head-quarters of the world-renowned Scuola Salernitana. It is a small mean-looking house, the walls of dazzling whiteness, the windows closed with green-painted shutters. I scratched the wall with my nail, I looked eagerly for some symptom of antiquity in the foundations of the walls, but nothing of the kind was to be seen. The house had in all respects the air of the country box of a worthy citizen of Paris. I visited the chambers of medicine, of law, of theology, and saw a few students, save the echoes of whose footsteps and my own all was silent.

I next visited the cathedral; but this too had lost its ancient character; modern restorations had given it a bastard and uncertain physiognomy. The sole vestige of the once famous school of Salernum is no longer in the city: in a convent of Benedictines, dedicated to the Holy Trinity, are contained the historical relics of the former grandeur of

Salernum; they exist in the shape of an immense library, which boasts a collection of no fewer than 50,000 MSS. Surely there must be something precious, something interesting in this immense collection; but who can tell? The Benedictines of Salerno, forgetting the laborious industry of their predecessors, live in loathsome indolence, and reckon nothing either of letters or science. They show their MSS. with pride to the traveller; but the most important MS. of all in such circumstances, is wanting,—there is no catalogue!—*Ed. C. in Gazette Médicale de Paris de Sept. 21.*

HYPERTROPHY OF THE CARTILAGINOUS STRUCTURE OF THE TRACHEA AND BRONCHI.

By PROFESSOR GINTRAC.

BACCHI, native of Bourdeaux, eight years of age, of a feeble constitution, with the chest narrow, sternum prominent, and the breathing always more or less affected; often suffered from pains in the chest, on account of which he was several times admitted into the hospital, and relieved by general and local bleedings, and the application of blisters between the shoulders. On the 24th of May he was readmitted, labouring under great difficulty of breathing, amounting at times to suffocation. He had no cough, and the voice was neither raucous nor whispering. Auscultation only indicated marked bronchial wheezing; percussion was sonorous throughout; the heart's action regular. The patient was pale and thin. Various means were employed, such as assafoetida injections, fumigations with datura stramonium, ipecacuanha, in alternative doses, digitalis and scammony, sulphuret of iodine, but without producing any decided change in his symptoms. On the 8th of July he left the hospital, but came back at the end of a fortnight labouring under the most aggravated dyspnoea, and died on the 8th of August.

On examination of the body, the lungs were found adhering to the cavity of the chest, excepting at the summit of the left lung, where there was a little clear serum. The pleura was thickened, and separated with greater ease from the ribs and intercostal spaces than from the surface of the lungs. The larynx was healthy. The trachea was free in its upper two-thirds, but in its lower third it was closely united behind to the oesophagus, and in front to the large vessels by means of dense cellular tissue. The trachea, when separated, appeared larger than natural, but on opening it throughout the whole extent its parietes were found considerably thickened, especially at its lower part close to its bifurcation. The parietes of the canal were seven millimetres in thickness; they were dense, elastic, white, and of

a fibro-cartilaginous appearance. The calibre of the trachea, in consequence of the hypertrophy of its parietes, presented a remarkable diminution; it was reduced to five millimetres. The lungs were oedematous; the inferior lobe of the right lung was hepatized. The thymus gland was rather large. The heart, stomach, and intestines, were healthy. The liver was enlarged, and adherent to the diaphragm, kidneys, spleen, and arch of the colon. Its tissue firm, granular, and red.—*Gazette Médicale, September 7.*

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

Gentlemen admitted Members on Friday, Aug. 23.—G. Leith.—J. F. Rowlands.—B. W. Costerton.—T. Palmer.—J. Rider.—J. H. Dwyer.—W. G. Sedgwick.—R. Brent.

APOTHECARIES' HALL.

Gentlemen who have obtained Certificates, Sept. 19.—T. Shaw, Ashby de la Zouch.—B. Micklethwait, Sheffield.—J. Reid.—J. R. Diamond.—J. A. Poole, Mattock, Somerset.—H. Kyd, Harefield, Middlesex.
Sept. 26.—James Smart, London.

MORTALITY OF THE METROPOLIS.

Deaths from all causes registered in the week ending Saturday, September 21.

Dropsy, Cancer, Diseases of Uncertain Seat	108
Diseases of the Brain, Nerves, and Senses	131
Diseases of Lungs and Organs of Respiration	192
Diseases of the Heart and Blood-vessels	23
Diseases of Stomach, Organs of Digestion, &c.	74
Diseases of the Kidneys, &c.	8
Childbed	9
Paramecia	0
Ovarian Dropsy	0
Disease of Uterus, &c.	1
Arthritis	0
Rheumatism	3
Diseases of Joints, &c.	2
Carbuncle	1
Phlegmon	0
Ulcer	0
Fistula	0
Diseases of Skin, &c.	0
Old Age or Natural Decay	45
Deaths by Violence, Privation, &c.	7
Small Pox	37
Measles	18
Scarlatina	87
Whooping Cough	14
Croup	5
Thrush	8
Diarrhoea	28
Dysentery	3
Cholera	3
Influenza	0
Ague	1
Remittent Fever	2
Typhus	33
Erysipelas	11
Syphilis	0
Hydrophobia	0
Causes not specified	3

Deaths from all Causes 857

WILSON & OGILVY, 57, Skinner Street, London.

THE
LONDON MEDICAL GAZETTE,

BEING A
WEEKLY JOURNAL

OF
Medicine and the Collateral Sciences.

FRIDAY, OCTOBER 11, 1844.

LECTURES
ON THE
NATURE AND TREATMENT OF
DEFORMITIES,

*Delivered at the Bloomsbury Square
Institution.*

BY R. W. TAMPLIN, F.R.C.S.E.
Surgeon to the Institution.

Talipes varus non-congenitus—Talipes valgus—Talipes equino-varus—Talipes equino-valgus.

IN my last lecture I pointed out the character and treatment of talipes varus congenitus, and mentioned that various causes had been assigned for this deformity, but that, in my opinion, the position of the child in utero was the most probable, as no spasm nor evidence of disease is found in the nerves or brain; contraction of the muscles alone exists, the patient possessing voluntary power over the contracted muscles as well as over the muscles that are kept on the stretch, (elongation would imply increased length of muscle). I also stated, that I did not believe in structural shortening of the muscle, as, in the case I had an opportunity of examining after death, the divided ends of the tendon were brought quite into apposition, although no trace of the deformity remained, and the little patient had exercised the voluntary motions of the deformed foot with as much facility as those of the other foot, which had not been thus affected; that in infants you had to contend only with *muscular resistance*, but that in childhood, and in adult deformity, you would experience a greater or less amount of resistance from the contraction of the ligaments of the joint, which rigidity would require the most steady extension to overcome; that in the adult, and also in those who had walked for any length of time on the deformed foot, you would find a great obstacle

to the cure of the deformity from the increased arch of the tarsus and metatarsus, the fifth metatarsal bone being forced inwards towards the metatarsal bone of the great toe; that in all cases the division of the contracted muscles, *i. e.* the posterior and anterior tibial muscles and tendo-Achilles, was necessary, and very frequently the plantar fascia also, together with the long flexor of the great toe—at all events, in those cases in which any great degree of contraction existed there; that in infants these muscles should all be divided at the same time, but that in adult and younger patients who had used the deformed foot much, and where there was great rigidity in the ligaments, it would be necessary to divide the posterior tibial and anterior tibial muscles, and if necessary (which it very generally is) the plantar fascia also, and to abduct the foot before dividing the tendo-Achilles; that rest and warmth must be enjoined here, as well as in every other case; that extension was not to be commenced until after the punctures should be healed. I also described the method I have adopted in dividing the posterior tibial tendon, namely, by puncturing the fascia, and introducing a blunt-pointed knife between the bone and tendon, so that no risk could be incurred of puncturing the artery; that a complete division of the artery had been found to be of no moment; and that I had effectually (when this division had occurred) stopped the hæmorrhage by the application of pads of lint and bandages. I would also recommend you (in the event of dividing the artery, which event you will always be enabled to discover from the jet of blood following the knife, and from the sudden pallid condition of the foot) not to attempt extension for a week afterwards, as you might run some risk of disturbing the clot, and thus producing false aneurism. In the case I mentioned, in which this occurred, forcible extension was made by the hand four days after the operation, at which time

there was no evidence of false aneurism, and the puncture was completely healed; so that I have always suspected that the clot in this instance was disturbed. Should you meet with false aneurism, I would advise you not to postpone the attempt to secure the artery, but at once to lay open the sac, and take up the artery by means of the needle and ligature, as you cannot expect, save in adult cases, to secure the artery by taking it up alone. I also pointed out to you the necessity of artificial support. The support I find most successful is an upright support, (with a stop-joint at the ankle), reaching from immediately below the knee, and fixed in the sole of the boot, with the strap attached to the sole on the outside, the strap passing directly over the instep to buckle on the inner side, below the stop-joint at the ankle; so that constant pressure is kept up on the instep, at the same time that the flexion of the joint is allowed; and by these means the patient is enabled to take exercise immediately that the foot is restored to its normal position; thus attaining a double benefit, the exercise of the muscles in their proper position, and the advantage which the patient derives from air and exercise; the ligaments, or passive agents, also gaining strength during the time they are so exercised in their proper position. It is also as well never to allow the patient to sleep without a support of some kind, until the foot will maintain its position unassisted, and until the cicatrix has resolved itself into its permanent condition. I must again remind you, that the greatest perseverance is necessary, as well as care and attention, or your efforts will certainly be frustrated; and should you improve the foot without completing the cure, rely upon it a gradual relapse will follow, whatever care you may take to prevent it. I have had in my private practice cases that had been operated upon several times. In one case the tendo-Achilles had been divided three times, and the foot had been brought into a tolerable position; yet, by inattention to the details of the after-treatment, and by neglecting to complete the removal of all contraction and rigidity of the muscles, as well as want of attention to the motions of the joint, a relapse took place, and greater obstacles were placed in the way of treatment than existed in the first instance. In fact, so great is the additional resistance of the tendon after redivision, that the cure becomes very tedious and troublesome, requiring the most unremitting and constant extension,—far more than is necessary upon the first division of the tendons.

I shall now proceed to describe the species of deformity called talipes varus non-congenitus. In this deformity you have the same relative position of the bones, muscles,

and elongation of the ligaments, but rarely if ever the same amount of rigidity. It arises, 1st, from the irritation of teething, as, in fact, does almost every distortion of the foot; 2dly, from inflammation of the joint; 3dly, from measles, small-pox, and any cause of irritation of the brain and spinal marrow. When it arises from the irritation of teething, or any cerebral irritation, it comes on gradually, either preceded by complete paralysis of the entire side or extremity, or of the abductor muscles solely: frequently the deformity is combined with talipes valgus of the other extremity, of which we shall have to speak hereafter. Upon the recovery from complete paralysis, one or more muscles remain paralysed completely; and, of course, those recovering their lost power, having no active opposing force, draw the foot in this or that position, according to the muscles so affected.

In talipes varus non-congenitus the tendo-Achilles will be found contracted, and the posterior tibial muscle, occasionally the anterior tibial, will be found paralysed; and the deformity appears, in some instances, to have been determined by position, the weight of the body pressing the foot over, and thus producing it; and this would be more likely to produce an inversion than an eversion of the foot, when the heel is completely elevated. In all cases of non-con-

FIG. 1.



Illustration of talipes varus non-congenitus, taken from a boy fourteen years of age, both feet being affected from the irritation of teething when two years old.

genital deformity, where partial paralysis coexists, you have a greater amount of atrophy of the entire limb, especially below the knee, when it is confined to the foot, as in this instance; and you will find that definite outline, so conspicuous in congenital talipes varus, equally entirely absent; but there will

be an unnatural smoothness of the foot, so much so, that you will, after some experience, be enabled to tell at first sight a congenital from a non-congenital distortion. There is also, as I before mentioned in *talipes equinus*, a diminished nervous power, the limb rarely retaining its natural heat even during the summer months; and in the cold weather patients thus affected suffer periodically from chilblains.

Patients afflicted with non-congenital *varus* suffer much more pain and inconvenience in walking than those who are afflicted with congenital *varus* only, as the cushion, upon which they walk, is much more quickly and easily irritated, owing to the diminished vitality, or nervous power, of the skin, on the one hand, and from the relaxed condition of the ligaments on the other; for although the ligaments, from position, become contracted, yet they do not possess that tone and rigidity which they do in congenital deformity; and the ligaments on the external side of the joint, namely, the external lateral ligaments, which have become elongated, do not appear to hold the foot sufficiently firm to give steadiness to the joint; hence the great weakness experienced by the patient.

When the cause of deformity arises from inflammation of the joint, you have of course no paralysis, nor any effect similar to that just detailed, the deformity having been occasioned by position; and you will rarely find that complete inversion of the foot which is found in congenital cases, the patient walking more on the anterior and outer side of the fifth metatarsal bone, (vide fig. 1) and the foot having amore uniform sweep from the *os calcis* to the toes. I have a case of this kind now under treatment, in an hysterical female, where inflammation has been for some time existing in the ankle, and the foot has gradually become inverted by the constant action of the anterior and posterior tibial muscles, together with the *gastrocnemius*; no paralysis existing in the *peronei* muscles. But the anterior tibial, and also the posterior, as well as the *gastrocnemius* muscles, are in a constant rigid condition, without the foot being touched, or any force being applied to abduct it.

The treatment of non-congenital is precisely the same as the treatment of congenital deformity; that is, the division of the anterior tibial tendon (if contracted), the posterior, and the tendo-Achilles, as well as the plantar fascia. You must direct your attention especially to the natural heat, and proceed more cautiously with the mechanical treatment than you will find it necessary to do in the congenital deformity, from the inability of the skin to bear much continued pressure without its vitality being destroyed, which must be most carefully guarded against, as this interferes with and prolongs the treatment, allowing the newly-formed

substance to gain strength, without your being able to extend it when newly formed, and thus increasing the difficulty in the after-treatment. After the foot is brought into its normal position, greater care will be required to keep it so, as the attachments of the joint being weakened from the general loss of tone, and one or more muscles being paralysed, it appears, and is in fact, comparatively unattached, and will yield in any direction it may be pressed in by the weight of the body; so that you must see the necessity for the most perfect and firm support after the foot is in position; which support will, in all probability, be required for years. You cannot be too minute in your directions to the machinist, or in cautioning the patient. In this case, also, the foot must be supported during the night, as any motion, even without the weight of the body, keeps up the play allowed by the relaxed condition of the ligaments, and prevents their contracting upon themselves, which they will do even in these paralytic cases, if the position is constantly maintained, and the muscles have become sufficiently strong for the patient to walk with a common boot without support. But this must be the result of time.

In contractions arising from disease, of course you will not think of operating until all symptoms of disease have disappeared. You may, however, improve the position of the foot and prevent an increase of deformity by carefully applying a splint, and by the constant and almost insensible extension you can keep up by means of a bandage; which at the same time that it prevents and diminishes the deformity, also assists the restorative process by keeping the limb perfectly steady, so that the patients experience great comfort from it; and this method may at all times be adopted, and will not interfere with the treatment you are pursuing in order to remedy the disease under which the patient may be labouring.

After the disease has subsided, the tendons should be divided in the usual manner, and then proceed with the mechanical treatment; and as soon as the foot is brought into position, exercise the motion of the joint, to prevent it becoming fixed by the adhesion or alteration of structure in the synovial membrane; this can be done by means of the instrument, which will effect it with less pain to the patient, and with more certainty, than by means of the hand. As a guide in the treatment of *talipes varus* generally, the patient ought never to suffer a sufficient amount of pain to interfere with his general health or rest. The most severe cases may be treated in such a way that the patient will be subjected to very little or no pain if proper care and due diligence be used by the medical attendant; of course there will always be found more or less uneasiness

from the constant stretching of the ligaments of the joint. This applies not only to varus but to every deformity, and will be found the safest as well as the most speedy method of cure.

We now come, gentlemen, to another species of deformity of the foot, viz, talipes valgus, or flat foot, vulgarly called splay foot. This deformity is exactly the reverse of the last considered, and I would first draw your attention to the anatomical condition of the foot, as this deformity more than any other depends primarily for its cause on the ligaments or passive attachments of the sole of the foot. It will be recollected that the calcaneo-scapoid ligament, and the ligamentum scaphoideo cuboideum plantare, together with the ligaments connecting the scaphoid bone with the cuneiform bones, form the principal support to the arch of the foot, *i.e.* passively; you have also the plantar fascia with the flexors, which assist materially, as well as the muscles of the sole, and the tendons passing into and through it; but these muscles cannot and do not exercise much influence except during the active condition; they depend in a great measure on the integrity of the form of the foot for their perfect and full amount of motion. Now the arch of the foot must be considered as a double arch; first, the natural arch, as understood generally, extends from the heel to the great toe, and 2dly, the lateral arch, or bridge from side to side, formed by the scaphoid, cuboid, and cuneiform bones, and extended to the tarsal extremities of the metatarsal bones; and the points of pressure are the posterior inferior extremity of the os calcis, and the anterior inferior extremity of the metatarsal bone of the great toe, and the anterior inferior extremity of the fifth metatarsal bone, or little toe. Now as long as the bones of the foot are held in their natural position, and no paralysis of the moving powers exists, free motion and elasticity in walking is derived from the arches described; but the moment the arch of the foot is diminished, the motions of the foot become limited, and ultimately, in the more severe cases, where the arches are entirely destroyed, it is altogether lost. The origin, then, of this deformity is a weakness or congenital elongation of the ligaments of the sole, and the muscles having a weakened instead of a firm point of insertion (for their insertion must not be regarded individually but collectively) will, in their action, assist the weight of the body in increasing the malposition. This deformity is both congenital and non-congenital, as you may have anticipated, and consists in a yielding or falling of the arches of the foot, the os scaphoides projecting and touching the ground on its inner and under surface, the head of the astragalus separated, of course, slightly on its inner side from the corresponding articular surface of the os scaphoides; the ligaments

I have before mentioned connecting the scaphoid with the os calcis. The scaphoid, with the cuboid and cuneiform bones, become elongated, and allow the arch to sink. The internal lateral ligaments become secondarily affected and elongated, and allow the astragalus in some cases to fall, and thus to lie obliquely in the articular cavity, whilst the external sides of the os calcis is approximated to the external malleolus. This

FIG. 2.

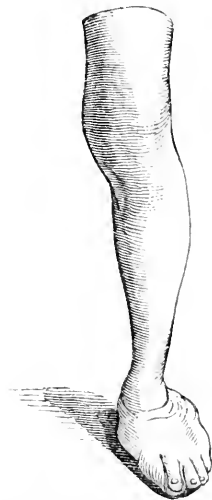


Illustration of congenital talipes valgus, in which may be observed the most complete flattening of the foot, no trace of an arch being left.

is the foundation, and what I imagine to be the origin, of this species of deformity. The next change that takes place is the abduction of the anterior portion of the foot, *i.e.* from the head of the astragalus, and appears to arise in the following way:—as the firm connection of the bones of the foot is destroyed, or for a time lost, it would yield in any direction in which it might be drawn by the muscles passing to and through and over the tarsus during their natural action, and as the extensors of the toes. The peroneus tertius on the dorsum, the peroneus brevis on the outer side, and the long peroneus passing beneath, have a powerful leverage in consequence of their passing under the external malleolus; hence the long extensors of the toes and the peroneus tertius in their action have a secondary effect in raising the outer edge of the foot beyond its natural position in part only, not altogether. The peroneus brevis and longus have also a secondary effect, *i.e.* abducting the anterior portion of the foot; hence the contraction from position of these muscles, and, as will be seen afterwards, the necessity of their section. With regard to the congenital form of the deformity, I have told you in my last lecture

that it is position in utero, and position alone, which occasions this kind of deformity as well as other congenital deformities that exist without malformation. There is no evidence whatever of spasm existing; the muscles are contracted, but not spasmodically; for I understand by the term spasm an irregular action of the muscles which is produced during the exercise of volition, and in defiance of volition. Spasm is never found to exist in the deformities I have mentioned, nor in the particular one now under consideration. In the congenital there is a more complete flattening of the entire foot (vide fig. 2); it is not confined, as in some instances of non-congenital deformity, to the internal side of the foot, but extends, as in the case before you, to the entire foot; there being no trace of an arch left, or in all probability none had ever existed, but from the circumstances before pointed out the muscles before mentioned had become contracted. The same diminished development of the muscles is here evident as in congenital varus, but to a much less extent, as although there is certainly a contraction of muscles mentioned, yet from the nature of the deformity the contraction is much less, and admits only of a limited amount of contraction compared to the great change in the position of the foot in talipes varus, and although contracted they possess great powers of motion—excepting only in the most severe distortion; and even here, as must be obvious, the extent of contraction cannot be very great. The non-congenital T. valgus arises generally from the patient having been in the habit of carrying heavy weights, or from being for many hours successively on his feet—at least these are the causes usually assigned. But there can be little doubt that there must be a predisposing cause, viz. general debility, which renders those suffering under this distortion incapable of bearing that great quantity of exercise or bodily fatigue which persons whose existence depends on their daily labour are compelled to undergo. We have had two remarkable instances of this deformity lately in the institution. The one a boy about 17 years old, the other about 20; the former was a gravedigger, the latter a farmer's labourer. The first thing which attracts the attention of the patient to this deformity in its incipient state, is a sense of weakness, more especially on the outer side of the ankle-joint, and the projection of the scaphoid bone with the head of the astragalus: they then observe the flat appearance of the sole of the foot, and the tendency of the inner ankle to approach the ground in walking: as the deformity increases, the pain in the joint and the sense of weakness increase to such an extent that the patient becomes totally unable to follow his ordinary occupation. And although the

FIG. 3.



Illustration of the most severe form of non-congenital talipes valgus, taken from a patient *æt.* 17, both feet being similarly affected.

FIG. 4.



The above, after treatment, which occupied three months. The anterior tibial, extensor communis digitorum, peroneus tertius, longus and brevis muscles, were divided.

internal malleolus does not touch the ground, yet it appears to do so. In the majority of cases the contraction becomes permanent of the peronei and extensor of the toes, which will be found prominent, and extremely tense on any attempt to adduct the foot, offering the most dense and unyielding resistance, and in the case of the gravedigger above mentioned, the anterior tibial tendon also became contracted; I imagine, from the constant instinctive efforts made to raise the arch of the foot. In such cases the joint becomes immovable, which arises, I suppose, from the circumstance of the astragalus lying obliquely in the articulation—its inner edge fallen, and its outer edge raised. Thus the synovial membrane becomes pressed upon constantly on the two lateral points of pressure, which it is not accustomed to bear. This, with the constant stretching of the ligaments, is the cause of the pain, which at times is most severe.

In some cases of non-congenital talipes

valgus you will find the whole ligaments of the foot in a loose state, allowing of undue motion in any direction; it is not confined to those supporting the arch, but it is extended to the whole foot: here you will find no contraction of the muscles. Although when the foot is pressed upon by the weight of the body it is perfectly flat, yet when raised from the ground the patient possesses power to move it in any and every direction, so that time is not allowed for contraction of the muscles to take place. For instance, when the foot is on the ground, the peronei and common extensor muscles are somewhat shortened, or have a diminished extent of motion; the moment the foot is removed from the ground the anterior and posterior tibial muscles raise the arch, and then each alternately being elongated or shortened, no fixed position is maintained. The peronei muscles are not permanently shortened, and consequently no contraction arises. We have amongst the out-patients at this time a case in point. It is a difficult variety, because there is no fixed point to act upon, and the great difficulty which will be found to present itself is the maintaining of the foot in a constant position, for if this position cannot be maintained a cure cannot be effected. And the difficulty of maintaining this position is much greater than you would have anticipated *à priori*; it being not a part, but the whole of the connection of the bones of the foot that requires support. In true talipes valgus congenitus I have never found paralysis of the muscle, but in a species of valgus which I shall hereafter mention, it is a common occurrence. I have met with the deformity, where it was supposed to arise from rheumatism, in the case of a patient about 40 years of age, at least that was the cause assigned, and when I first saw the patient he was suffering from some rheumatic affection. The peronei muscles were exceedingly tense as well as the extensors of the great toes. The arch was fallen, but I have reason to believe that the circumstance of the rheumatic affection first drew his attention to the deformity, as I ascertained upon inquiry that he had experienced a weakness of the joints for some time previously. Strange as it may appear, patients suffer much more pain and inconvenience from this species of deformity than from the more severe distortion of varus.

CARUS'S EARTH-LIFE — A SPECIMEN OF IDEAL PHYSIOLOGY.

To the Editor of the Medical Gazette.

SIR,

I HAVE derived much pleasure from observing that you have of late occa-

sionally published translations and abstracts of the best foreign essays in the higher branches of physiology, and have encouraged your friends to communicate them by your own example, and by giving up to them a certain portion of the most important section of your journal. Your custom cannot fail to exercise a good influence on the profession. We are all too apt to degenerate into mere routiniers—to let our intellects be unoccupied till they are fit for nothing better than the routine of the trade of our profession. We need, at least once a week, to be roused by seeing how actively others are pursuing science, and to be tempted to exert ourselves to attain their knowledge, or detect their errors, or, at the least, to keep up the habit of thinking upon somewhat more than we learned years ago.

Having profited, I hope I shall be allowed, in return, to contribute in the carrying out of your design. In this view I inclose an abstract of the chief part of a work by Dr. Carus, long known as one of the most accomplished of modern physiologists, and lately better known (and highly esteemed for his social as well as his scientific qualities by all who had the pleasure of forming his acquaintance) as the attendant physician of the King of Saxony. He is a practitioner, and, I believe, a very good one. The contemplations in which he indulges occupy a different portion of his mind from that which is engaged in the daily business of his profession, and science and practice do not interfere with each other.

The work* appears to me one of the best examples of the ideal physiology by which so large a section of the scientific world of Germany is captivated. I am not sure that the system is substantial; yet it is strange, and much in its favour, that something of the kind has been in the thoughts of some of the most enlightened philosophers of nearly every age. But, whether it be true or not, the mind may be well exercised in considering it; it has all the beauty of poetry, and more of religious feeling than our own utilitarian systems of physiology have; and if it have not the truth of science, let the reader prove its errors, and catch somewhat of the spirit of reverential

* "Zwölf Briefe ueber das Erdleben, von Dr. C. G. Carus." Stuttgart, 1841.

contemplation in which it seems to have been written.

I will add, only, that I have taken pains to make the translation as literal as possible; the obscurity of which some may accuse my language is strictly copied from the original; and I am not sure that much of what is peculiar to this system would not disappear if it were expressed in ordinary language. But my design has been to give an example of ideal physiology as it is. — I am, sir, yours and your readers' servant,

L.

Sept. 12, 1844.

THE grand error, says Carus, into which men commonly fall in their contemplations of the universe is, that they imagine, as it were, two natures; one living, the other not living; in one of which they include the nature of men, animals, and plants; in the other that of the earth and heaven, and their phenomena. But "whoever, unfettered by prejudice, attentively observes the life of all nature, finds everywhere one and the same essence and operation in the life of the celestial bodies, and in that of the terrestrial beings more nearly related to ourselves. In the ever-whirling sphere of the planet, with its in- and ex-halations, the regulated circulation of its waters, its magnetic and electrical vital exercises, he discerns nothing essentially different from what he sees in the infusorium rolling round with oscillations in the water, and in the circulation of the fluids in the higher creatures, the results of magnetic and electrical oppositions." Nor are the elements composing the bodies of the one class different from those that make up the others. "Do not the same hydrogen, carbon, oxygen, and nitrogen, the same metals and metalloids, that are dispersed throughout terrestrial nature, make up the individual organisms; nay, even man's own body? Are they not the same elementary actions, such as attraction and repulsion, electrical and chemical energy, which work alike between the strata of the earth and of the atmosphere, in the growth of plants and in the motions of animals? In a word, is not nature ONE SEA of being, in which an infinite diversity of ideas are in a thousand ways reflected, and whose drops appear in myriad forms, as at every instant they arrange

themselves according to the law of this or that idea? The same carbon lived yesterday, perhaps, in our blood, which to-day floats still active in the atmosphere, and to-morrow may work within the germinating plant. In truth, then, there can in no case be any question about a difference of organic and inorganic, of living and dead, elements." Things differ, not in their real and inherent nature, but according to the idea or design which for the time is embodied in them as members of one universe.

To form a definite conception of nature and organic life, it is indispensable to have a clear notion of the meaning of the words "organic," and "organism," and of the relation in which nature stands to them. Now, "if we derive them from their origin in *"οργανον,"* what else can an organism be than an instrument or member, generating, producing, and so exercising its life, according to the guidance of the idea, whether conscious or unconscious, that dwells within it? Every such organism or member, in so far as it is a being appertaining to nature, is a manifestation of her ever-changing elements, and so is *manifold*; but in so far as its existence is determined by a prime-design, *by an image of its being previous to its being*, it belongs to the ideal world, and so is an unity, an individual. In the former view it has what we call a body; in the latter what we name the soul, whether conscious or unconscious. Inasmuch, then, as the complete manifestation of the organism depends on its proper idea continually and intimately pervading its changing elements, we say,—the idea, the soul, incorporates itself in it, enlivens it, and it becomes *living*.* Life, then, can properly mean nothing else than the permanent incorporation of the prime-design in the being, or of idea, in nature." And if we now proceed to a wider and freer glance over the world, our inmost consciousness will at once say that this notion of the incorporation of the "living essence" is as well adapted to the whole universe as to each single organism; and that, therefore, "of necessity life must rule through all the spheres, and that the real and absolute opposite of life, a

* It is not possible to express the full force of this passage in a translation. The German *Leben*, life, being derived from *Leib*, body, *einleben* may mean either to incorporate or to enliven.

genuine and complete death, is utterly impossible, and to be classed only with the notion of an absolute zero, or a complete negation."

All nature, then, is animated, and "may be compared to an infinite sphere, whose centre is everywhere, the periphery nowhere. Nor is this a mere poetic image; its truth may be proved with mathematical accuracy. For what is the distinctive character and proper notion of the sphere, but that it is a form in which all the possible diameters are exactly equal? And if the infinity of nature must be admitted as self-evident, will not all the conceivable diameters that can be drawn through any given point in it be equal, *i. e.* equally infinite? And again, while the spherical form is proved by the equality of the diameters, must it not also follow from the infinity of the sphere, which excludes the notion of a bounded periphery, that every possible point in it may be taken as a centre through which the infinite and all-equal diameters may be drawn?"

From these considerations there plainly follow some important consequences in regard to the primary form of all organisms. It must be remembered that "the entire macrocosm, that is, all nature, animated and pervaded by the divine ideas, the great Immeasurable, as one comprehensive living whole, is to be considered as the source and aggregate of every particular form and manifestation of life; and from this again it plainly follows, that every single being, every individual, every particular organism, can be regarded only as a part, and indeed as one integral part, of this immeasurable whole. It is further self-evident, that every integral part of a whole must partake of certain essential properties of that whole. Wherefore, if, as before stated, the principle of the spherical form be really and of necessity proper to the universe of nature, then may it be at once explained why every single organism must present, or rather must embody, the spherical as its primary form."

To this first law of formation must be added a second, namely, "that the formation of an organic whole cannot take place except from the fluid state. For how can the formation of that which is defined, bounded, and shaped, come to pass except from that which is

undefined, and as yet unbounded, and not fixedly shaped? But if the fluid be just that form of substance which has no determined boundary, and yet, in respect of boundary, is infinitely determinable, we see at once the necessary foundation of this second great law of nature"

And again, a third great and general law of nature, which is indeed hardly more than a corollary to the first, is that each individual organism must exhibit more simplicity both in its form, and in the intrinsic and extrinsic exercise of its energies, the further we go back into the history of its former life; so that in every respect an organism always proceeds from greater simplicity to higher complexity.

Now nothing can present a more striking example, and at the same time a more decided proof of the truth of these positions, than the history of the formation of the heavenly bodies, as it is represented to us in that of those "cosmical infusoria," the meteoric stones. Of these "Chladni has rendered it most probable that in the infinite space of the universe spherical masses of vapour form, and float about." These may be believed to be vapours of such metals as by combustion form earths, and to be produced by a diversification of the ether that fills all space; and "when they come in contact with the earth's atmosphere, they are set on fire by an electrical discharge, and either pass away, giving a moment's light, and then disappearing in the form of shooting stars, or else, by more thorough burning, melt into drops of various size, and then, attracted by a planetary mass, fall down upon it as meteoric stones. And if we now consider that that heavenly system which comprehends our own earth, and which is best known to us, shows us certain *fixed* forms which exhibit on a large scale the two in which these cosmical infusoria are manifested, namely, 1stly, nebular and indeterminate bounded spheres, and 2dly, others denser, and bearing evident signs of original fusion—of which one set are called comets, the other planets—these observations acquire a far higher import; they promise to us many nearer conclusions even on the formative history of the planet we inhabit, and they may serve besides as striking and illustrative examples of the three stages

of formation just mentioned" For we have in them the primary spherical form, the fluid material, and the formation of divers solid crystalline substances out of it.

But the simple phenomena of a drop of water will illustrate the same laws; and the understanding that has once apprehended them, or rather the mind that has once perceived them, for they are objects of the reasoning faculty, will be able to comprehend at once a number more. The drop of water, then, presents to us the purest liquid in the simplest form of individuality; and, is it not marvellous! if I isolate a quantity never so small of this fluid, and let it float in space, at once there is aroused within the mass of as yet undetermined, though infinitely determinable, shape, the all-pervading vital principle: the idea of unity works in it by the attraction of its whole mass to one centre, and as this attraction is of necessity the same through the whole of the uniform mass, that form is at once produced whose radii are all equal, that is, the sphere; and the mass of water, now a drop, has made the first step in organization, but unless further excited, remains fixed and restrained in this stage; for the idea which has enlivened it is not powerful enough to maintain its manifestation with any constancy against the restless tug of the elements Yet still there hovers over this drop of water as a prototype of its being, or as an ideal model, a law, in which is decreed a solid form to be assumed under certain conditions,—and we call this production of a solid form, before invisible, but by an inherent law decreed, out of a fluid, *crystallization*; and we recognize it as one of the most remarkable processes, as a process, an act, by which originally everything which appears to us in a fixed solid form, whether it be called stone or plant, earthy or animal body, was determined. Rightly to comprehend this simple formative process is indeed to comprehend all formative life; for through all the grades of complexity of formation, we have nothing but this act, which in the crystal is shown in its first power (for in it the form once attained is permanent), carried on to the 2d, 3d, or it may be the *n*th power, as at the end of some cycle the being (a plant or an animal for example, in

each year or any other period,) changes its form.

But to return to the drop of water: so long as the electrical tension between the different parts of the planetary system, which we call heat, pervades this fluid sphere in a certain high degree, it does not succeed in satisfying its tendency to individual formation; but if this tension sinks to a certain degree, then that bond of universal life is loosened, and individual life attains strength to exhibit itself: then it is that that which just now floated in the space, a clear and fluid sphere, now rendered crystalline by cold, on a sudden floats onward as a solid six-rayed star; till a renewed permeation of its substance by an electrical radiation of heat again, through a retrograde metamorphosis, produces the simple spherical form, and converts the solid star again into the round fluid drop.

All this is but an image of the plan that prevails through the entire universe; there is in it neither empty space nor rest; and though our senses cannot tell us what fills the heavenly space, yet our reason and analogy assure us that it is that original formative element of all the bodies of the universe, that element of all elements, which merely is, but is utterly indifferent, and therefore not in any wise sensible, and for which the best name is ether (from *ἀέθέρ*). Now, if we suppose that, as in our own minds, the awakening idea proves itself in the most varied images and operations, so the Divine Idea established in ether endless differences and vital tensions; then the outward radiating eccentric tension will appear to us as Light, the concentric constraining tensions as Gravity; and a formation of heavenly bodies giving light and gravitating towards one another will be intelligible. And if we remember that every organic being must first appear in spherical form, and first move in a sphere, we attain to the simplest conception of the cosmogeny or formation of the universe. But further, just as in the development of the egg we see the arrangement of structure around structure, of encircling or peripheral around central or middle structures, so in the mightiest cosmical phenomena the same foundation-law rules; and hence the necessity of certain spheres becoming central, while other peripheral spheres,

coincidentally developing themselves out of the ether, form a system of worlds something like our solar system.

A glance at our own solar system shows us plainly the different developmental stages of these structures, in the series from the meteoric nebular comets to the single planets; thence to the sun-like planets that have moons; and lastly to the sun himself: for here we see a production of the definite out of the indefinite in form, and a progress from the peripheral to the central. But all this is far more striking when we look to that series in development in which we have first those unbounded nebulous spots in the firmament covering spaces inconceivably great, yet visible only with the most powerful telescopes, and apparently fixed, like the stars themselves, far beyond the nearest of which they lie; then, those yet smaller grouped and rounded nebulae in which the brighter spots give a real light, and that more intense at the centre than around: and lastly, the two brighter nebulae that are visible even with the naked eye in Andromeda and in the sword of Orion.

Proceeding from these examples to the consideration of the necessarily analogous formative history of our earth, we may first point out the arrangement of the elementary substances, which are all products from the ether, in a series according to their several grades of development; from those nearest to the ether, the hydrogen, oxygen, &c. to those which are most nearly perfected in their fixity, and have attained the nearest to that state to which all tend, namely, the noblest metals, gold, silver, &c. Light, heat, and electricity, it must also be remembered, are not bodies, any more than seeing, hearing, and feeling, are organic tissues, but "the original vital and sensual energies of the ether moved by the divine idea and differing itself. The ether sees and illuminates, it feels and warms, it polarises and is electrical;" and from it, light, heat, and electricity, are derived to all bodies as energies in which the life of all matter manifests itself.

The first appearance of our earth, then, may be conceived to have been in the form of a nebular sphere of ether condensed into gas and vapour, rotating on itself and around the sun, and diversifying itself. From this enormous

mass of condensed and polarizing ether, we may venture to imagine how, in the time which we call the origin of the earth, the several elementary substances issued forth; how enormous masses of the vapours of silicium, kalium, &c. were borne out of it, and formed a denser rotating vaporous sphere: how the primary gases, oxygen, hydrogen, and nitrogen, came forth, and how the discharge of electrical polarity between the Empedoclean elements of earth and air produced the two other elements of fire and water, the former in the burning of the metallic vapours into liquid, molten earths, the latter in the form of watery vapour, as the product of the combustion of the hydrogen and oxygen. And with this, the first period of creation ending would pass into the second, which would be distinguished by the state of the cloud-enclosed fiery liquid; and on this day we may conceive that the earth was one huge drop of glowing molten earths, surrounded by an atmosphere of gases and of watery vapour. The most terrific volcanos, the loudest storms, the fiercest earthquakes, all combined, would be but an air, a breath, in comparison with the fearful strife of raging forms in such an elemental planet. Yet must formation still go on; and in the third day we may believe the solid form produced. From the analogy of the development of the egg by the formation of solid peripheral layers around the central fluid mass, and from some appearances about the earth itself, it is probable (though the crystallization of the drop of water indicates otherwise), that this solidification commenced on the surface of the liquid sphere, and proceeded to a thickness of about 170 miles towards its centre. In the interior of the hollow sphere the molten fluid state is still preserved, as it probably is also in parts of the earth's walls; a condition again comparable with that of the egg, for as in that we see currents of fluid blood remaining in the substance of the germinal membrane as it develops itself, and its surface becomes denser, so in the walls of long-extinguished volcanos there are constantly volcanic heats and development of gases. With the gradual cooling and solidification of metals oxydized by combustion so as to form quartz and lime, alumina, &c. was formed that shell of the earth which, as it con-

stitutes the deepest basis of all known kinds of rocks, is named primitive granite; but, coincidently with this, we may suppose was the precipitation of the cooled watery vapour of the atmosphere into the depressions on the shell, so as to form a primitive sea; and with this separation of water and earth would close the third period of creation.

But the tendency which there is in parts to follow the type of the whole which they compose, would engender the formation of numerous hollow spheres by gases and vapours heaving up parts of the earth's surface as it cooled; and these huge bubbles, when they opened and collapsed, would leave enormous basins, in which the first collections of the waters of the primitive sea would settle. And then, as all these actions still went on, new precipitates would fall from the ethereal nebula of the planet's atmosphere; masses of metallic earths would be dissolved in the sea, and, by the myriads of the lowest forms of animal life about this time produced, there would be engendered enormous quantities of lime (for lime is always formed in incubation); and thus with fresh storms and liftings up, and burstings of the granite, there would be great depositions of lime, which, burnt by the volcanic heat, would form the primary limestones, while from fresh meltings of the granite there might result, after the manner of lavas, the later forms of granite and of quartz. Now, too, as the watery vapours and the atmosphere gradually cleared, the light of the sun and of the wide firmament would break in upon the planet, enlivening and animating its surface; an epoch which may be regarded as the conclusion of the fourth period of earth's development, or of a fourth day of creation.

Just as in the seed or the egg the shell bursts when the young one has attained its full development, and as then first the new-born creature opens its organs to the light, and enters into free and self-dependent intercourse with the universe, so did the young earth appear through the bursting envelope of nebula, and now for the first time did the sun's rays, and the light from thousands of the heavenly bodies, act immediately upon the new-born planet. The result was the excitement of a new individual life; and from air, earth, and

water, as the concipients, and the solar fiery influx as the generant, myriads of new and higher individuals began to be developed, and a marvellous world of organic forms came forth; and then there was a fifth period, in which rest prevailed over the former storms.

It is difficult, indeed, to imagine how the larger plants and animals could be formed from elements, but it must be remembered that the first beginning of each of these is but a microscopic infusorial vesicle, and that therefore for these, as for all other beings, the only difficulty is the conceiving of the elementary generation of this vesicle. We may observe, too, that the stage in which each organism exhibits its power of generating new ones, is just that which immediately follows the attainment of its own complete development; and is it probable that the life of the earth is an exception to this rule, resting as it does on the very foundation-laws of organic life? When the elements first settled from their strife, must there not have ensued, under the exciting influence of the animating, polar, and even polarity-generating force of the sun, a higher and more significant generation of living beings than are produced from them in their later age?

It is most probable that the earth passed through its earlier stages of development far more rapidly than through the later; and just as in the organic beings which we can inspect, we find that the metamorphoses passed through are greater the nearer they are to the original production, so it seems to have been with the earth, in which the earlier changes were not only more rapid, but more striking than the later. After the production of animal life, and during what may be called the sixth period of the creation of the earth, it is probable that the changes it underwent were produced partly by its inhabitants, and partly by the atmosphere and the water precipitated upon it. If, in the present day, we see a constant mutual play between the air and the earth, a constant precipitation upon its surface of water from the higher regions of the atmosphere, and a constant absorption of watery vapours by the mountains; if we see a fine dust depositing itself upon the highest rocks from what appears to be the purest air, and me-

ON THE

PATHOLOGY AND TREATMENT OF
OVARIAN DISEASES ;

WITH CASES.

By DR. SAMUEL J. JEAFFRESON,
Physician to the Chelsea, Brompton, and Belgrave
Dispensary, &c.

[Continued from p. 865 of last vol.]

teoric stones falling, all increasing the volume of the earth; and if, in the belief that the earth is a hollow sphere, we may reasonably consider that the productive ether within it is also constantly adding to its substance; we can at once perceive that in the earlier periods of the life of our planet a more considerable deposition of these metallic vapours would be going on, and sometimes by gradual addition, sometimes by mighty revolutions, would constantly augment its mass. When a world of plants and animals had for a long time animated the earth's surface, and, by the addition of their calcareous and carbonaceous deposits, had increased its size, new eruptions and heavings up of the surface, new changes of the earthy products, would ensue. At this period, also, it is likely millions of marine creatures would die by the development of new metallic substances in the floods, and, sinking to their bottom, might be again raised up in rocks. Sometimes, also, the waters, forced from their beds, would stream over the land, burying together forests and animals; and all these things, perhaps, went on through a series of years, through the most varied cycles of storm and rest, till at last a fresh clearing up of the atmosphere—by this time probably again obscured by the old comet-like nebula—took place; again the enlivening light of the sun, and of the firmament, fell on the tranquil earth, and at the beginning of a seventh formative period of its life new generations of plants and animals came forth. At the length appeared the *MICROCOSM*, *MAN*, placed by a higher, finer, and more central organization, at the head of all terrestrial organisms; *Man*, whose consciousness was destined to reflect a ray of divine light, just as the sun's image is thrown back from the crystal clearness of the pure drop. And as the eldest tradition of the earth's creation ascribes six days to work, and gives the seventh for rest, so science indicates that the period extending from the last-mentioned to our own day has been one of constant comparative tranquillity.

THE *surgical treatment* applicable to the permanent cure of ovarian disease remains now to be considered. Nothing can be further from my wish than to go out of my own province and trespass upon that of the surgical members of my profession, who must necessarily be more competent than myself to draw just conclusions on the subject. I shall simply content myself with such a brief sketch of the prospects held out by surgical treatment as may enable the physician to estimate in some degree all the chances which may be afforded to his patient by means of art. With this view, also, I have, to the best of my ability, constructed a statistical table of the results of operations for extirpation of the ovaries: if this table should be found by surgeons incomplete for all the purposes to which it might have been rendered applicable, my only apology can be that it was never intended to do more than to afford a rough estimate of the value of this operation. It is next to impossible that physicians, or other practitioners who do not handle the knife, should remain perfectly neutral; it is simply my wish, therefore, to afford them some data on which, combined with tact and practical experience, they may afford opinions justly entitled to the weight which may be attached to them by the patient.

Two surgical means have been proposed for the cure of ovarian disease; the one consists in the introduction of foreign bodies within the cyst to produce a cure by means of inflammation, suppuration, &c., the other in the entire removal of the tumor.

The former intention has been effected by means of various injections in the instance of the more fluid tumors, thrown in after the removal of their contents, much as in the treatment of hydrocele. In the less fluid tumors, the same purpose has been effected by

more freely laying open the tumor, by leaving the trochar in the wound, or by introducing a bougie, strip of lint, or some other foreign body.

The results of this practice seem to have been of four kinds: death—no improvement in the condition of the case—temporary retardation of the progress of the disease—and permanent cure. So far as I can learn from a reference to published cases, the mortality of this operation does not appear to be so great as might reasonably have been expected; whilst in a fair proportion of cases it has effected permanent cure. Its employment has, however, almost invariably been followed by serious constitutional symptoms, and even in the most successful cases it presents the great inconvenience of a painful and tedious process, the contents of the tumor gradually running off for months or years by means of an open fistulous sore: during all this period, too, the patient, as well as the medical attendant, are kept in a painful state of suspense as to what may really be the ultimate termination of the case. Without in any degree anticipating the question of the propriety of the extirpation of ovarian tumors, yet the comparative rapidity of the cure, and the speedy comfort thus derived from the entire removal of so cumbrous a growth, may well entitle this mode of proceeding to a decided preference over the other; that is, in the comparison of successful cases of either kind: nor, indeed, would these advantages be dearly bought at the expense of some little increase of temporary pain, and slightly greater risk to life, the latter of which conditions, however, there appears no reason to believe is in reality the case.

If such comparison be just, the operation of extraction should therefore banish the former proceeding from practice.

The removal of ovarian tumors by incision through the abdominal parietes, an operation occasionally resorted to some thirty years ago, has only within the last few years been advocated by any considerable number of practitioners. If not the originators of the operation, British surgeons at least deserve the merit of having placed it upon any thing like a sure foundation.

Great difference of opinion still ex-

ists with regard to the propriety of this operation; and if the question were at once to be settled on the mere authority of opinion, the decision would probably be in the negative,—a large, perhaps the greater, proportion of those whose authority stands deservedly high in public estimation, being opposed to it. Such decision, however, neither can be or ought to be final; like other questions of a like nature it must eventually be decided upon its own merits: and it is more than probable that here, as in most other instances, truth will be found to lie midway between the opposing parties, and that whilst the one has to retract its decided veto, the other also may find the applicability of the operation less general than their at present sanguine expectations had induced them to expect.

The responsibility of either party is indeed momentous; for whilst it would be highly culpable, on the one side, rashly to vaunt a comparatively useless operation, fraught with imminent risk to life, it can be regarded as no less culpable, on the other, to lend its authority to the utter condemnation of a measure which may tend to the prolongation of life, and the diminution of human misery.

Abdominal surgery has of late years made great advances, and the practicability of operations must now rest, not upon suppositions of *what may be the case*, but upon facts, *what is the case*. It is in vain in the present day to say, “how can the abdominal parietes be laid open to the extent of from nine to fifteen inches, the delicate viscera therein exposed to the air, and the patient live?” This matter is decided; there are the facts before us. Believe them we must, in spite of their discordance with our preconceived notions. This, however, is but one step gained. Before arriving at any approximation even at a just conclusion, the risks and advantages of the operation must be carefully balanced against the risks and disadvantages of the disease. The probable results of the operation must be weighed against the probable results of the disease, left to nature, or combated by other means. The general as well as the especial obstacles to the performance and success of the operation must be carefully considered, as also its proportionate applicability to particular forms or cases.

I shall now take the liberty of drawing the reader's attention to the following statistical table* of the results of 74 operations for the extraction of ovarian tumors. The materials from which this table has been drawn up have been chiefly derived from the *Lancet*, *Medical Gazette*, and *Medical Times*; they have been also compared with Dr. Churchill's table in the *Dublin Medical Journal*, from which source three or four cases previously omitted by myself have been copied; and for an account of the three operations by Mr. Lane I am indebted to that gentleman himself, whose readiness to afford me every assistance and information, and desire to promote a strict scrutiny into the result of these operations, did equal credit to the kindness of his heart and the soundness of his judgment.

The table has been divided into three great classes.

1st. Of the cases in which the ovarian tumor has been removed by the large abdominal incision, the hand being introduced within the peritoneal cavity for the purpose of separating adhesions, passing ligatures on the pedicle, &c.

2dly. Of the cases in which a small incision has been made, through which the cyst has been drawn (first emptied of its contents, and tied externally); and,

3dly. Of the cases in which the removal of the tumor has been attempted, but abandoned on account of adhesions, or in which the tumor has been found to be other than ovarian, or in which no tumor has been found at all.

[To be continued.]

CASE OF EXCISION OF NEARLY ONE-HALF OF THE LOWER JAW-BONE.

By S. CHISHOLM, M.D. Inverness.
(For the *Medical Gazette*.)

THE operation in this case was undertaken under rather unfavourable circumstances, the patient being a man 68 years of age, and having been operated upon for carcinoma of the lower lip about six years previously. He was admitted to the Inverness Infirmary on the 22d of June last, for a tumor of the

left side of the lower jaw, which he stated first made its appearance about a year and a half ago, and has been gradually increasing in size. The tumor at the period of his admission was about the size of an orange, of a semi-fluid consistence, having a portion of the skin of an unhealthy hue, from the diseased connection of the morbid growth with the superficial parts. The face was very much deformed, and the mouth so distorted, that it was with considerable difficulty he could manage to take his food. His general health was tolerably good, although there seemed a tendency to chest complaint. At a consultation held on the case, it was unanimously recommended that excision of the diseased part should be performed, as the only means holding out the prospect of relief, at the same time that the disadvantages for the operator were fully admitted. The nature and extent of the operation having been explained to the man, and he himself rather urging its adoption, the operation was accordingly performed in the following manner.

After puncturing the tumor, and evacuating about an ounce of glairy fluid mixed with pus, an incision was first made from the condyloid process, down the posterior border of the ramus of the jaw, and along the margin of the bone to the chin, the diseased portion of the skin being included in an elliptical incision. An incision was then carried directly downwards from the angle of the mouth, to join the other. The flaps being sufficiently dissected from the tumor, and the jaw near the symphysis separated from its connections, so as to allow the finger to be passed round it, a groove about one-third the diameter of the bone was made with a small saw, and then, by means of the cutting forceps, the jaw was completely divided. The cheek was now further dissected from the tumor and bone, along the ramus of the jaw to the glenoid cavity; and after depressing the bone, the temporal muscle was separated from its connection with the coronoid process. This step of the operation was attended with some difficulty, owing to the powerful contraction of the temporal muscle; but with the aid of a sharp-pointed bistoury, passed up under the zygomatic arch, and around the coronoid process, the difficulty was overcome,

* The length of the Table prevents our giving it in the present number, but it shall appear in our next. — *Ed. Gaz.*

and disarticulation was then easily effected. The bone thus detached was turned downwards and backwards on the neck; and by proceeding with the dissection carefully, and close along the inner surface of the bone, the operation was completed with very little loss of blood. The internal maxillary and other arteries of magnitude escaped injury. The inferior maxillary branch of the internal maxillary, the facial, and two other smaller vessels, were secured by ligature, and the parts brought together,—the divided lip by the twisted suture, as for hare-lip, and the other parts by stitches. A pledget of lint soaked in cold water was applied externally, and the part bandaged up. There was no plug introduced in room of the jaw.

At the first dressing the parts looked well, and subsequently there was very little purulent discharge. The whole united by the first intention where there was a sufficiency of skin; but from the unavoidable necessity of excising the diseased portion of skin, an opening of considerable size remained to be filled up with granulations. The lip part united by the first intention, and the pins were removed on the fourth and fifth days. The granulating process in the open space was promoted with the nitric acid, and sulphate of zinc lotions, and continued to go on favourably; but one or two of the cervical glands, situated below the sore, became enlarged, and the granulations assumed a rather unhealthy aspect.

The man was now (end of July) removed from the hospital, in order to have the benefit of salubrious air and greater liberty to walk about. He finally left town for home on the 28th of August, having his health and strength so far restored, as to be able to undertake the journey of upwards of sixty miles into the highlands. At this period there remained a fistulous opening in the situation of the angle of the jaw, but it was gradually contracting under the use of the sulphate of zinc lotion; and at his own urgent request, his daughter having unexpectedly come for him, he was permitted to go home, with a supply of the lotion. The deformity was considerably less than prior to the operation, and he managed to take spoon meat with facility. At the period of his departure two of the cervical glands were considerably en-

larged, so that the man's immunity from further disease is very uncertain; yet temporary relief has been afforded by the operation, and with him it would have been highly satisfactory but for the constitutional malady, which threatens a new outbreak of malignant disease. I may remark, that notwithstanding the unfortunate season of the year (July), and other adverse circumstances, the discharge after the operation was not nearly so offensive as might have been expected in such a case; and this, perhaps, was mainly owing to the absence of a plug in the place of the jaw. I must say, that I do not see the necessity or advantage of a plug in those cases, although recommended on such high authority as it is. In this case it was totally inadmissible, from the extent of skin necessarily cut out entirely.

On examining the diseased bone after the operation, it was found to be affected with *spina ventosa*, originating in the cancellated texture of the bone, which had expanded into the size to which it attained.

Inverness, Sept. 13, 1844.

REMARKS ON
MR. PATERSON'S CASE OF UTERINE
HÆMORRHAGE.

To the Editor of the Medical Gazette.

SIR,

IN No. 51 (date September 20) of your valuable journal, the report of a case of "Accidental Uterine Hæmorrhage" is given, by Mr. Paterson, of Glasgow.

As I venture to differ from that gentleman, on the propriety of following in all similar cases the same plan of treatment he adopted, and as the subject is one of the utmost importance to the accoucheur, you will perhaps favour me by giving insertion to the following remarks.

The main features in Mr. Paterson's report are these. The patient was seized with severe flooding in the ninth month of pregnancy, which continued with but little interruption until delivery was accomplished. At an early period (*i. e.* on the first vaginal examination), the os uteri admitted the fingers, and was "*found soft*." The vagina was plugged, and the effect of the tampon very judiciously aided by external pressure.

An hour and twenty minutes elapsed, during which time four two-drachm doses of *secale cornutum* were given. Meanwhile an alarming amount of blood had been lost, and the prostration of the patient was correspondingly great. The os uteri was now found more dilated, and the membranes, which presented, protruding, they were *with some difficulty* ruptured. The hæmorrhage, however, "*threatened to continue*," and the administration of the ergot was resumed, as before. After the second dose labour pains set in, three of which sufficed to expel the fœtus, the placenta, and "*a basinful of coagula*." The patient, though reduced to a state of the most extreme exhaustion, survived.

The treatment relied on by Mr. Paterson for the safety of his patient in this instance, treatment which the result may seem to justify, and which, therefore, he advocates in cases even of "*unavoidable*" as well as "*accidental hæmorrhage*," however alarming, consists in the application of the tampon, with the addition of abdominal compression; in the exhibition of the ergot of rye in large doses at short intervals; and in the rupture of the membranes at as early a period as possible. The operation of "*turning*," he would altogether forego. Each of these remedial means will afford me opportunity for a few observations.

Opinions are very much divided as to the efficacy of the tampon in controlling hæmorrhage. For my own part, while I admit it to be a valuable adjunct to our other resources, I cannot believe with Mr. Paterson, that we can "*arrest hæmorrhage*" by its use, however firmly and uniformly the abdomen be at the same time compressed. If the separation of the placenta be extensive, and the flooding consequently severe, an oozing of blood from the open mouths of the utero-placental vessels must take place, its flow being only diminished, not suppressed, by the formation of coagula consequent upon the presence of the plug in the vagina. That it continued "*internally*" in Mr. Paterson's case is evidenced by the "*basinful*" of clots which immediately followed the placenta. Unless, indeed, the vagina be *thoroughly filled* by the tampon, it is worse than useless, for then it but masks the flooding which it cannot check.

Without attempting to enter upon the "*vexata questio*" of the virtues of the *secale cornutum* in producing uterine contraction, with a simultaneous dilatation of the os uteri, it is sufficient, I think, to refer to the details of the foregoing case to prove that it cannot be relied on. Twelve drachms of the drug were given in infusion in the space of about three hours, before expulsive action was established, and then not until the liquor amnii had been evacuated more than an hour.

To the most strenuous advocate of this medicine it must appear questionable whether the uterus acted in obedience to the stimulus of the ergot, or whether it followed the natural law, the impulse to contraction being given by the rupture of the membranes. Are we, then, to sit calmly down, placing implicit faith in the powers of the tampon to subdue the hæmorrhage, *however alarming*, and await hour after hour, the tardy, and always doubtful, effects of the *secale cornutum*?

On the expediency of rupturing the membranes at the earliest possible moment, in cases of "*accidental hæmorrhage*," there cannot be two opinions. It is no new fact that this measure is often alone sufficient to arrest serious flooding; but it is certain also, that the more complete the disunion of the placenta from the uterus, the less can we reckon on its beneficial agency, because the less probability can there be that the mouths of the bleeding vessels will be closed by the contraction of the uterus on its diminished contents. All the circumstances of Mr. Paterson's case went to shew that the separation of the placenta was by no means partial, if, indeed, it were not entire; the consequence was, the operation failed of success, the flooding continued, and the position of the patient became momentarily more and more critical. The rupture of the membranes must then be looked on as an expedient by which, in very many instances, all danger may be averted, but as a step *preparatory* only to the operation of "*turning*," should the hæmorrhage continue.

A few words on the subject of "*version*" will enable me to bring these remarks to a conclusion. For the old axiom touching "*meddlesome midwifery*" I have the highest respect, but "*mischievous*" as it is, that practice, I conceive, is much more culpable which

pertinaciously adheres to doubtful remedies, when a patient's life is hanging on a thread, and sets aside the only certain means of rescue, speedy delivery by turning. If after the rupture of the membranes the contractions of the uterus are not so prompt and so effective as to quiet all apprehension, version is as imperatively called for as in cases of placenta prævia. If, as Mr. Pater-son assumes, it be not a rule universally admitted to "turn" in placental presentations, it is at least so general as to need no justification from me, for it would be almost equally judicious to trust entirely to nature, because the placenta has occasionally been thrown off first, and the patient survived, as to expect that in an arm presentation the position would be naturally rectified, or spontaneous evolution take place.

Your obedient servant,

WILLIAM ANDREWS, M.D.

2, Suffolk Place, Pall Mall,
Oct. 1, 1844.

DR. LETHBY'S CASE OF POISON- ING WITH OXALIC ACID.

To the Editor of the Medical Gazette.

SIR,

I AM disposed to think that the following case presents peculiarities which may give it an interest to some of your readers. I therefore place it at your disposal, and have the honour to be,

Yours, &c. &c

W. LETHBY, M.D.

12, Tredegar Square, Oct. 7, 1844.

An unmarried female, named Rebecca Pentland, aged 22, of previously good health, had, on Saturday, Sept. 28th, a quarrel with her lover respecting another of his mistresses, and, in a fit of jealousy, after he had left her, she took oxalic acid, and destroyed herself: she was found, on the following morning, dead in her room. My friend Mr. Garrett was sent for, who made a post-mortem examination of the body—removing the stomach and its contents, although he had great difficulty in so doing from the corroded and softened condition of that organ.

These he brought me to examine. The stomach was very much blanched, except in two or three places, where there were small black spots, as if blood had been effused and acted upon

by the poison, and here and there a blood-vessel might be seen ramifying, with its contents similarly blackened. The tissue of the stomach was so softened and disorganized that it could scarcely be handled without tearing; indeed, at the cardiac end it was reduced to a pulpy or gelatinous consistence, and had numerous perforations in consequence.

The contents, which had been saved in a tumbler, amounted to about six ounces in quantity; the fluid was of a dark colour, like porter, and contained very little solid matter; it was strongly acid, and, on being tested, was found to contain about three drachms of oxalic acid.

REMARKS.—It has been doubted by some authorities whether oxalic acid has any corrosive action on the stomach. Dr. Christison, I think, only mentions one case in which he found the stomach perforated after its exhibition; and Mr. Taylor remarks that in his experiments on animals, and from some few observations on the human subject, he has found nothing to bear out the view that perforation is a common effect of the action of this poison. This case, however, is sufficient to shew that softening and perforation may take place, and in a medico-legal inquiry it is proper and important to bear the fact in mind.

NOTICE

OF THE

CRYSTALLINE FORM OF CARBONATE,

AND DISCOVERY OF THE

OXALATE OF LIME IN THE URINE OF HERBIVORA.

BY DR. GOLDING BIRD,

Assistant-Physician to Guy's Hospital.

(For the Medical Gazette.)

THE study of the healthy and pathological conditions of the urine of the lower animals, especially of those which are exclusively herbivorous or carnivorous, promises to throw much light upon the nature and treatment of analogous changes occurring in the renal secretion of omnivorous man. Although it is a difficult task to procure the urine of the carnivora, yet from the ordinary domesticated herbivora there would be no difficulty in

collecting the secretion in abundance. I venture to make these remarks in the hope that some of our professors of veterinary medicine may be induced to turn their attention to this subject; for a chemical and microscopic examination of the urine of the horse or the ox alone promises to afford much important information on some points of humoral pathology. I know of no mode so likely to obtain a satisfactory answer to the much-litigated question of the pathological relation existing between urea and uric acid, as the study of the urine of healthy herbivorous animals. The popular theory of the day, propounded by Professor Liebig, is, as is well known, that a low amount of oxygenation going on in the system causes uric acid alone to result from the destructive metamorphosis of tissues, whilst, if an ample supply of oxygen occurs, the acid is wholly or partly converted into urea; oxalic acid being regarded as a morbid product, the result of an access of oxygen insufficient to change the uric acid into urea; being a sort of transition stage from the former to the latter. Urea exists in the urine of the horse with an abundance of hippuric acid, but no uric acid. I am not aware that oxalic acid had been detected, prior to my noticing the fact which forms the chief subject of this communication. It would be very interesting to ascertain whether, in a horse hardly worked and kept without food for a few hours, as a quickly-driven post-horse, uric acid ever appeared, or oxalic acid became increased in quantity. The microscopic examination of the urine of the lower animals will, in a pathological sense, be, as in the human subject, of greater or at least equal importance with the chemical examination.

A short time ago, I had some urine collected from a horse which had remained in the stable unworked all day. I desired my groom to collect it in a large cylindrical glass vessel, and take every care to exclude all dust and dirt.

This urine was yellowish-brown, almost syrupy in consistence, had a strong smell of the stable, and was alkaline to red litmus-paper. It was turbid from the diffusion of a powder which, by repose, subsided as a fawn-coloured copious deposit. The urine being decanted and mixed with hydrochloric acid, effervesced violently, and in a

few hours became actually full of beautiful crystalline masses of *hippuric acid*, which required many washings with water, and one crystallization from dilute alcohol, to become nearly white.

The deposit was washed with water until it lost nearly all odour, and a portion was submitted to microscopic examination. The great mass consisted of myriads of round transparent bodies, gritty to the touch, and resembled completely spheres of glass. These were very difficult objects to define, whether by refracted or reflected light, on account of their refracting light to a focus like spherical lenses. When allowed to dry, these bodies retained their transparency. On the addition of a drop of acetic acid they dissolved with violent effervescence, and consisted, indeed, of carbonate of lime. When the spheres of carbonate of lime were immersed in Canada balsam between thin plates of glass, they exhibited a beautiful structure, which was not previously visible, each being made up of minute needles radiating from a common centre, like some zoölites—a form peculiarly interesting, in relation to the analogous acicular structure of the dumb-bell oxalate, discovered, three years ago, by myself in human urine. On examining the spheres of carbonate in the balsam with polarized light, they presented the same exquisitely-beautiful phenomena which are exhibited by the crystalline lenses of fishes, each shewing a set of beautifully-coloured rings, traversed with a black cross. These formed altogether the most interesting objects for the microscope I have ever met with.

The spheres of carbonate varied greatly in size, ranging from mere points up to $\frac{1}{2000}$ th inch in diameter. I was greatly surprised to find in the deposit from this urine an abundance of octahedral crystals of oxalate of lime, far exceeding in size any I have ever found in human urine. To examine them with advantage, the deposit from the horse's urine should be digested in acetic acid, by which the spheres of carbonate, and a few prisms of triple phosphate, are dissolved. On adding boiling water to the solution, a crystalline deposit of oxalate of lime collects at the bottom of the vessel. This consists of crystals of the same

perfectly octahedral form as those met with in the human subject; consisting of four-sided pyramids placed base to base.

Some few of these crystals presented a form I have never before seen, being short four-sided prisms having each extremity surrounded by a tetrahedral pyramid.

The oxalate of lime in the horse presents a light-amber colour, whereas in man the separate crystals are invariably colourless; the largest I observed possessed a magnitude of $\frac{1}{150}$ inch. On pressing them between plates of glass they readily split into smaller and tolerably regular octahedral fragments. They could only be preserved dry for examination, for in balsam they became nearly invisible.

What is the source of this oxalate? Is it, as in man, a result of mal-assimilation of ingesta, or of the effete elements of tissues? Can it be traced alone to *rumex acetosa* which abounds in most hay? These are questions of importance, not only from their physiological interest, but from the bearing they may possibly have upon the treatment of oxaluria in the human subject.

Myddelton Square, October 1844.

ACESIUS:

A SURVEY OF THE ETHICAL RELATIONS OF
MEDICINE.

By C. F. H. MARX, M.D. &c.

(For the *London Medical Gazette*.)

[Continued from p. 16.]

TO GEORGE CHEYNE,—

During my sojourn in England I found the Quakers so exceedingly obliging, that I have no hesitation in asking you, who belonged to that respectable community, and exerted yourself so much in the cause of dietetics*, who was the author of the temperance-thermometer here appended†. I am extremely curious to ascertain whether the inventor lived prior to 1743, the year in which you died, or at a later period, and you first heard of it in that place where there is neither summer's heat nor winter's cold. As I have some thoughts of writing a treatise on this

very useful instrument, and make it a rule to treat subjects of the kind with special accuracy, you will I trust be disposed to pardon my present importunity.

True, your country possesses Father Mathew, who, by the influence of his word, and, as it appears, by the distribution of his medals, has accomplished so much that, in my opinion, he needed no other instrument than his own pure intentions; probably a good end may be attained in other places too by these same means. A strikingly obvious proof acts most powerfully on the masses; and who knows better than yourself, that the aphoristic sayings of the school of Salerno have done more service than all the rest of the detailed and elaborate works written on hygiene?

There are two things which I highly prize in you, and which suffice to beget confidence both in your character and in your judgment, namely, your decided aversion to personal disputes*, and your truly just and rational commendation of water-drinking†. To the incidental remark, that fasting contributes to cheerfulness, I no less willingly subscribe‡.

When once I come to express my sentiments on the subject of dietetics, my rules for passing happily through life shall consist in a very few propositions. Health I should consider as a virtue, serenity of mind as a duty: I would show that disgust at being sick cannot be impressed too deeply on the mind; for sickness, which is the negation of health, is not only an ob-

* Account, p. 9. I heartily condemn and detest all personal reflections, all malicious and unmannerly turns, and all false and unjust representations, as unbecoming gentlemen, scholars, and christians, and disapprove and undo both performances, as far as in me lies, in every thing that does not strictly and barely relate to the argument.

† Ibid. p. 21. I firmly believe, and as much convinced as I am of any natural effect, that water-drinking only will preserve all the opulent healthy from every mortal distemper, and that a diet of milk and seeds, with water-drinking only, duly continued, and properly managed, with proper evacuation, air, and exercise, is the most infallible antidote for all the obstinate diseases of the body, and distempers of the mind, so far as it depends on the body, the present state of things will permit; and that it will cure every disease in the body, curable, and will render the distemperature of the mind more tractable; and that, at all events, it will make both more tolerable than they can possibly be otherwise.

‡ Ibid. p. 50. The times of abstinence is one reason of the cheerfulness or serenity of some Roman Catholic and southern countries.

* Dr. Cheyne's account of himself and of his writings. London, 1743-8.

† See scale, bottom of next page.

stacle to, but a belying of, destiny. The *valere aude** I would propose as a general form of salutation.

Be not uneasy, most honoured doctor, lest I shall require too much; I well know, it is easier to ask questions than to answer them, easier to give precepts than to follow them. To recommend temperance to the maiden in the dance, to the young man at the banquet or in love, to the daily labourer at his work, were a vain and thankless office: to

advise the imprisoned captive to take exercise in the open air would appear like mockery.

I am free to acknowledge that rigorism in admonition and prohibition is, generally speaking, carried much too far. My endeavour would be confined to this: to expose and proclaim the simplest means; to be always serene in mind; to admit in the body no accomplice but a friend, and if necessary, to put life upon the saveall.

* *Sapere aude*: Hor.—ED.

† A MORAL AND PHYSICAL THERMOMETER;
Or, a Scale of the Progress of TEMPERANCE and INTemperance.

70	Water;	{	Health, Wealth,		
60	Milk and Water;		Serenity of Mind,		
50	Small Beer;		Reputation, long Life, and		
		{	Happiness.		
40	Cyder and Perry;	{	Cheerfulness,		
30	Wine;		Strength,		
20	Porter;		and		
10	Strong Beer.		Nourishment, when taken only at Meals,		
			and in moderate quantities.		
0					
TEMPERANCE.					
		VICES.	DISEASES.	PUNISHMENTS.	
10	Punch;	Idleness;	Sickness;	Debt;	
			Puking, and		
20	Toddy and Crank;	Peevishness;	Tremors of the hands in the Morning;	Black Eyes;	
30	Grog, Brandy and Water;	Quarrelling;	Bloatedness;	Rags;	
40	Flip and Shrub;	{	Red Nose and Face;	Hunger;	
			Swearing;	Sore and swelled	
50	Bitters in Spirits;		Obscenity;	Legs;	
			Swindling;	Jaundice;	Hospital;
	Hysterical Water;	Perjury;	Dropsy;	Poor-house;	
60	Gin, Rum, and Whisky, in the Morning;	Burglary;	Melancholy;	Jail;	
			Madness;	Whipping;	
			Palsy;	Botany Bay;	
70	Do. during the Day and Night.	Murder;	Apoplexy;		
		Suicide.	Death.	Gallows.	

It must be candidly confessed, that most persons are unhappy, because they are afraid of the possibility of mishap; they struggle too little against it, they take whatever occurs in too unfavourable a light, and look not at the good side of the thing.

The full and complete idea of Fortune seems to those palpitating with anxiety so uncertain and so suspicious, that they beg it may not be called up. They reflect not that Fortune * aids the brave; by Fortune I understand self-confidence accompanied with prudence. Complaints attend almost every occurrence. People laugh at the flagellators who mangle their bodies on the tombs, and weep at the experience accumulated on the graves of times gone by. As beggars hawk their sores in begging, so do they draw consolation from their inward wretchedness.

But aid is to be sought in quite a different quarter. Let every man strive to be master in his own house, that is, in his own person; let him never cry back, as sportsmen say—never be cast down. Let serenity of mind be sought in intercourse with universal nature, with man and with books†; and the purest enjoyment be preserved as a grain of seed, that it may spring up in days of tribulation. The saying that man's fate is his stomach, is perfectly true: good race-horses take but little food. The "death in the pot" lies not in the substance of the pot, in the lead or copper vessel, but in its contents: whoever has the pot filled with dumplings, &c. &c., should not wonder if his heart also become too full in time.

Physicians should not weary of giving currency to the leading principles of dietetics. By so doing they essentially assist in the goodly work of strengthening life in its fundamental conditions,—which is tantamount to prolonging it.

[* *Audaces Fortuna juvet.*—ED.]

† Here our author either had in his mind the stanza or the idea that prompted the stanza which is found under some of the portraits of Goethe. Here it is for our German friends:

Liegt dir Gestern klar und offen,
Wirkst du kräftig Heute, frei,
Kannst auch auf ein Morgen hoffen
Das nicht minder glücklich sei.

MEDICAL GAZETTE.

Friday, October 11, 1844.

"Licet omnibus, licet etiam mihi, dignitatem
Artis Medice tueri; potestas modo veniendi in
dubium sit, dicendi periculum non recuso."

CICERO.

THE MEDICAL PROFESSION BILL.

EDUCATION CLAUSES, RESTRICTIONS ON
THE GRANTING OF DEGREES, THE DEGREE
OF BACHELOR OF MEDICINE.

THE 19th clause of the bill provides that the several Colleges, viz. the Colleges of Physicians and Surgeons of England, those of Scotland and those of Ireland, shall from time to time, and when required by the Council of Health and Education, prepare and lay before the said Council a scheme or schemes of study, and particulars of the examination to be gone through by all persons applying to such Colleges respectively for letters testimonial as physician, or surgeon, or licentiate in medicine and surgery, and of the fees to be taken for examination and admission into the said several Colleges respectively; and the said Council shall be empowered to make from time to time such changes in any of the schemes so laid before them as to the said Council shall seem expedient; and the said Council shall endeavour to procure, as far as is practicable and convenient, that the qualifications and fees for the said testimonials shall be uniform, according to the nature thereof throughout the said united kingdom.

This clause obviously contains the elements of much good. The Council of Health must necessarily be composed of the most distinguished men in the profession, however they are chosen, from whatever quarter they are chosen, and they will doubtless feel it incumbent on them to exact a respectable extent of education, &c. from the candidates of every class and denomination. We almost wish that the paragraph which is conditional had

been imperative; that instead of the Council *endeavouring* to procure, as far as is practicable and convenient, that the qualifications and fees for the said testimonials shall be uniform, it had been directed that the Council should observe that the qualifications and fees *were* uniform. We take it, that with regard to the propriety of having the qualification uniform there can be no question: that the respective education of the physician, surgeon, and licentiate, ought not to differ in England, Scotland, and Ireland. As to the fees, we are in considerable doubt: England is a rich country, Scotland and Ireland are comparatively poor. It is not unusual in England for young men brought up to the medical profession to be men of a certain monied independence; this in Scotland, and we presume in Ireland also, is very, very, rarely the case, yet are the army and the navy, and the East India Company's service, furnished with many of their most active and intelligent medical officers from Scotland especially. Now, were the fees in Scotland assimilated to those of England, the expense would be too great; and then, were the English fees to be brought down to the level of those of Scotland, the English teachers would suffer: the expenses of living, to a professional man in London, are, at least, twice as great as in Edinburgh, Glasgow, or Aberdeen; if he has a somewhat numerous family to bring up, they are probably three times as great.

The 20th clause is also highly proper; it enacts that no University of the united kingdom shall grant degrees to any person unless he shall have matriculated and duly attended the courses of lectures prescribed during at least two years next before the granting of the degree, and unless he shall have undergone examination, and been found duly qualified. We believe that all the

Andrew's?) have now abandoned the practice of selling degrees in Medicine; this clause will effectually prevent its ever being revived; and in conjunction with the 16th clause, which makes a foreign degree, unless obtained after one year's residence at the University which grants it*, of no account, it will render access to the higher grade of the profession difficult—indeed, this grade will only be accessible in one way, viz. the having attained to 40 years of age, satisfying the College of Physicians of England that the preliminary and professional education had been liberal, and standing the test of examination.

Clause 21st is a manifest departure from the principle of uniformity for which the Bill has been commended. Universities of the united kingdom are to have power to grant the degree of Bachelor in Medicine to their own students who shall have attained the

* It will doubtless strike some of our readers, as it did us, to ask wherefore a less term of residence at a *foreign* university should be required than at an *indigenous* one? If one year at Giessen be enough, ought not one year at St. Andrew's to suffice? or if two years at St. Andrew's be thought not too many, why not the same number at Giessen? Thereby hangs a tale,—there are always so many wheels within wheels in the history of human action, that it is often difficult to discover the one which gives motion to the rest. We think we can follow the impelling power here however: the academical and extra-academical teachers of Edinburgh had a grave difference some years ago, which led to a total rupture and separation between them; to the extent even, that the pupils of the extra-academicals did not graduate at Edinburgh, where they *had studied*, but—at St. Andrew's, where they *had not studied*!

At a particular season of the year a certain extra-academical gentleman, a kind of agent for the University of St. Andrew's, used to appear wending his way at the head of 20, 30, and even 50 and more, of the extra-academical students of Edinburgh, towards the shores of the Firth of Forth; there he took shipping for St. Andrew's; all things were in readiness for the examination; the young men were found duly qualified, and within a week the party reappeared from Fife, the juveniles with their diplomas of M.D. in their pockets, and the agent with a new degree of *L.S.D.* in his. One year at a home University would not suffice to keep the stream running the right way; two may; and yet we are not sure of that: two years of extra-academical study at Edinburgh, and one of Collegediscipliniet Giessen or Erlangen, with an opportunity of seeing the world, &c. &c. the whole guaranteed at less than the academical rate,—we should not wonder that the long-headed agent of the St. Andrew's University, as agent for Giessen or Erlangen, would be found a match for the framers of the bill yet!

age of 22 years, which degree, its possessor having been examined by the Royal College of Physicians of England, Scotland, or Ireland, or by the Faculty of Physicians and Surgeons of Glasgow, will entitle him to registration by the Council of Health and Education as a Licentiate in Medicine and Surgery. One man will therefore register as a licentiate of medicine on the strength of an examination successfully stood before the examining body of one of the Royal Colleges of Physicians and Surgeons, another on the strength of his Bachelor's diploma and examination before a College of Physicians only. There is probably no great harm in this, but it makes distinction, and it renders the machinery more complicated than it needed to have been. This will be the entrance to the profession of which men of what is called *connection* or *family*—if such words can be used in reference to our truly noble but little considered profession—will avail themselves; it is probably a door left purposely open to them.

Having got thus far with the bill, we pause to make one statement which we think not unimportant to certain interests. Thus far we see the Council of Health and Education, and the several Royal Colleges, paramount; the Universities, which had hitherto been supreme, appear to us, and as we understand the bill, to be thrown altogether into the shade. Unless a student inclines to take a Bachelor's or a Doctor's degree in medicine, he will have no connection with his alma mater save and except as his nurse; the University—of Edinburgh, to select a particular instance—will become a mere nursery to its Royal Colleges of Physicians and Surgeons. The great body of the profession, in time to come, and as intended by the bill, will probably not take the degree of either bachelor or doctor in medicine, but of licentiate in medicine and surgery; and

this they will obtain, not from the University, but from the associated Colleges of Physicians and Surgeons. The Scotch Universities will sink into mere schools; the professors, save and except through their connection with the College of Physicians, or the College of Surgeons, will be simple teachers. It strikes us that they thus appear shorn of some portion of their dignity and honour by the provisions of the bill. The student of the University has hitherto been accustomed to look up to his professor not only as his teacher, but also, in some sort, as his patron, as the chief under whose certificate of competency he takes his place in the world. We heard much more of the presence in London of the President of the Royal College of Surgeons of Edinburgh, than of any representative of the *Senatus Academicus* of the College of James the Sixth, during the period when the bill was expected to be laid before Parliament. We own that we have a certain affection for our old University; and we should not be pleased to see it vailing the pennon to either College of Physicians or College of Surgeons. Doubtless the *Senatus Academicus* of the Scotch Universities understand their own interests, and will feel it their duty to look narrowly into the general bearing of the new Medical Bill, not only on their pecuniary interests, but on their dignity and consideration. The revenue they had as examiners will cease, at all events; it will flow to the coffers of the Colleges of Physicians and Surgeons; and to be poor in Great Britain means to be powerless. If the Universities have not seen the thing in this light, let them look to it closely.

THE LAUDATION OF THE SOCIETY
OF APOTHECARIES BY TOWN AND
COUNTRY PRACTITIONERS.

SOME few months ago, upon the appearance of the "Statement by the So-

ciety of Apothecaries on the subject of their administration of the Apothecaries' Act," we took occasion to animadvert upon what we believed to be an undue assumption of credit to themselves by that body, for the exertion of an influence of a highly beneficial kind on the progress and present state of that member of the medical profession in this country who is commonly spoken of under the title of "the general practitioner." The worshipful Society appear to have been taken at their word, however, by the majority of the meetings of medical men that have been held throughout the country, for the purpose of considering the Medical Bill: a beneficial influence exerted by the Society of Apothecaries, upon the state of the medical profession, has been all but uniformly prominently avowed.

We are still disposed to take a different view of the matter: we believe that the Society of Apothecaries have had no special influence whatsoever on the state and education of the medical man. The improvement which we remark is not alone conspicuous in the country where the worshipful Society holds sway; it is quite general; it has extended over the sister countries as well; indeed, over the whole of the Continents of Europe and North America. Had we in England alone made progress, and the people in Scotland and Ireland, in France, in Germany, and in the United States of America, remained in matters medical as they were before the eventful year 1815, doubtless there would have been strong grounds for suspecting that the Apothecaries' Society had been at the bottom of the undeniable improvement which medical education has undergone in the course of the last quarter of a century. But, seeing that the advance has been quite general, that it has been as extensive as letters and civilization, we, for our part, are not disposed to view the worshipful

Society in any other light than as bound to the car of human improvement and dragged on with it, not as hastening its progress. It is the general extension of knowledge that has made a larger amount of special knowledge in the medical man necessary, and no enactment of the Apothecaries' or any other Society. We are disposed to go farther than this; we do not hesitate to say, that we view the influence of the Apothecaries' Act of 1815 as having been hostile in many respects, much rather than advantageous, to the progress of true medical science and the best interests of the healing art. It has associated the *profession of medicine* in the public mind with the *traffic in drugs*, to the degradation much more than the elevation of the medical man in the social scale; and then its provisions in regard to the mode in which the practitioner acquired a legal claim to remuneration, led to a system of drugging of such unpalatable magnitude, that the better informed members of the community have finally rebelled against it, whilst the ignorant and the credulous have thrown themselves into the arms of homœopathy, and hydropathy, and empiricism in fifty different shapes, by way of finding refuge from it.

Another view of the case is this:—If the Act of 1815 has done all the wonders which general practitioners are at this time so ready to ascribe to it, how comes it that the very existence of their branch of the profession in its connections with the labouring classes is now threatened by crowds of uneducated and unqualified men in the shape of chemists and druggists? These men are actually disputing the field with the licentiate of Apothecaries' Hall, at this moment, in every town in England, and in many instances are taking the bread from between his teeth. The Act of 1815, in fact, is no protection to the educated practitioner; it is still

less, if that be possible, a protection to the community: the Act is a nullity for every useful purpose, both as regards the public and the profession. Its restrictive clauses have still been found inapplicable where they ought to have been most efficient; they have neither enabled the Society of Apothecaries to get at the practising chemist and druggist, nor at the bare-faced empiric; they have only let loose the dogs of the law effectually at the throat of the man of some standing, occasionally the graduate of a Scotch University, or member of a Scotch College of Surgeons—as good a man at least, and of as liberal education as he at whose instance the Society was moved to prosecute, or as any one in the body by which he was proceeded against.

The Act of 1815 did mischief in another and indirect way: it compelled the student to select not the place where he could obtain the best education at the least cost, but the place where he could obtain the education which would secure him a title to live at peace when he settled himself down as a practitioner. The tendency of the Act has obviously been to force the student from the quiet and application and economy of such an University as that of Edinburgh, or Glasgow, or Aberdeen, with its complete courses of instruction on every branch of medical science, into the noise, and dissipation, and extravagance, of the metropolis, where such monstrosities as lectures three times a week, and between 8 and 9 o'clock in the evening, on some of the most momentous sections of medical lore, are still exhibited and still endured. London as it used to be twenty years ago—a great finishing school of surgery—was very well; no one who knows aught of the habits and lives of medical students, and of the temptations to which they are exposed, does not know that it is most disadvantageously circumstanced for the seat

of schools for elementary instruction in medicine. But had Edinburgh or Glasgow or Aberdeen, had Hippocrates and Galen and Avicenna, Harvey and Sydenham, Haller and Cullen, for its professors, the direct tendency of the Apothecaries' Act has been to keep their benches bare of students.

The Apothecaries' Act has done yet further mischief: the system of examination pursued by the Court of Examiners of the Hall has been such that it has become imperative on every man who would secure his certificate there, to prepare himself especially for that examination by submitting to the degrading process of grinding; diligence during the whole period of studentship does not suffice; the test is of a kind that cannot be met by that; the Society has fostered into existence a set of men "who rather prefer the student at the end of his third winter session, who knows nothing, to him who knows something;" the former he is aware must rely upon him, and will be attentive to the cramming that suffices to bring him through; the latter is apt to rely a little on himself, and not enough on his grinder, and so between the two he is apt to make shipwreck.

We are not yet at the end of our bill of impeachment: the Society of Apothecaries' mode of administering the Apothecaries' Act has had this other ill effect. It is expressly enacted that the Society shall provide *apothecaries*, whose duty, as specified by the Act, it should be "carefully and accurately to dispense the prescriptions of physicians with pure and unadulterated drugs." The Court of Examiners of Apothecaries' Hall have only been ambitious to provide the community with highly-educated practitioners; a condition which the progress of the times would have required and accomplished without them. They have left the professional man, and the wealthier public, to the mercy of

shop-boys in the important matter of dispensing, and they have not been able to protect the labourer and the artizan from being practised upon by men who, though they may be skilful in discriminating drugs, and able as chemists, know no more of physiology and the practice of medicine than the cow-leech and the village farrier.

MOVEMENT IN THE PROFESSION.

IN the resolutions and speeches at the professional meeting held at Liverpool on the 2d inst., Dr. Jeffreys in the chair, we discover considerable shades of difference from the line of argument and objection that has now become trite and barren. Dr. Freckleton moved the first resolution, expressive of satisfaction "that ministers should have introduced a bill into parliament having for its object the better regulation of medical practice throughout the kingdom." Dr. Sutherland, in moving the resolution expressive of "regret that no restriction on irregular practice should have been provided by the substitution of measures more efficient in their operation than those contained in the acts proposed to be repealed—which acts, although they may not have been of sufficient power to remedy the evil, nevertheless, admit the sound principle that the practice of uneducated persons is contrary to law"—took occasion to refer to the charter of the College of Physicians, and the Apothecaries' Act, in the spirit of both of which irregular practice was considered as contrary to law. It was proposed by the new bill to repeal all charters which imposed restrictions on the practice of medicine—to place the educated on the same footing with those who had received no education at all, and for that they had a right to seek a remedy. It was unnecessary for him to argue that men intended for the medical profession must be men of education; the amount of knowledge they required was greater than for any other,—there was scarcely any branch of knowledge they did not require; and the principle that there should be a distinct body of men for that purpose had always been recognized. During the examination before the House of Commons it was stated to be almost impossible to put down illegal practice by the present act, on account

of the expense, but the circumstance of it being deemed necessary to suppress it showed it was an evil. Sir James Graham had stated the impossibility of putting down quackery, but he believed it could be accomplished if proper steps were taken in reference to it. The new bill itself admitted irregular practice to be an evil, for it excluded irregular practitioners from the army and navy, and from all public medical offices. If a practitioner were found not to be registered, let him be taken before the magistrate, and quackery would soon be put down; as far as law could reach it, that course would be most effectual.

The following excellent and temperate memorial to Sir James Graham was agreed to:—

To the Right Honourable Sir James Graham, Bart. Her Majesty's Principal Secretary of State for the Home Department. This Memorial agreed upon at a Meeting of the Medical Profession of the Town of Liverpool, held at the Medical Institution on the 2d of October, 1844,

Sheweth—

That your Memorialists hail with satisfaction the introduction into Parliament of a "Bill for the better Regulation of Medical Practice throughout the Kingdom." That they have given a careful consideration to the said Bill, and beg respectfully to submit to you their opinions on the same.

That inasmuch as the restrictions on unqualified practice as they at present exist in the several acts and charters proposed to be repealed in the first clause of the said Bill, have been local in their application, and have thereby frequently been injurious to well-educated members of the profession; and especially as they have never proved themselves to be a sufficient protection to the public against ignorant and unskilful pretenders, your Memorialists think it quite necessary that these acts and charters should be repealed and annulled.

That nevertheless these acts do acknowledge as a principle in law, that persons not duly qualified shall be prohibited from practising under certain penalties, and if they shall be repealed without at the same time substituting a *more efficient prohibition* against irregular practice; your Memorialists con-

sider this giving up of a sound principle as pro tanto legalizing the practice of unqualified persons, as tending to lower the dignity of the medical profession, and at the same time taking away from the profession its legitimate rights, while it withdraws all protection from the public.

That as the medical profession is at present constituted there exist registers of all qualified practitioners in the united kingdom, some of which are from time to time published; and that instead of these it is proposed to have one general registration, a measure of which your Memorialists cordially approve, as lying at the basis of all effective legislation on the subject.

That, by existing laws or usage, no unqualified practitioner can or does hold any medical office in infirmaries, dispensaries, poorhouses, or prisons; or in the army, navy, or East India Company's service, and that considering the proposed registry as a test of qualification; your Memorialists approve of it as a means of excluding as heretofore all unregistered and unqualified persons from such public medical offices.

That, as it is fully conceded by the Bill that it shall be unlawful for any unregistered person to practise in certain departments and public offices, your Memorialists know no valid reason why the same principle should not be fully carried out so as to render it unlawful for any one to practise medicine and surgery in any part of the United Kingdom, without being duly qualified and registered; while they are of opinion that great good would follow if the bill declared all such irregular practice subject to a penalty similar to that which the Bill inflicts on all unqualified persons practising in public offices, but recoverable by a summary process.

That your Memorialists are of opinion that a measure founded on the proposed registration may be devised, better calculated than the laws now existing to protect medical men as well as the public against unqualified practitioners.

We have farther notice of a meeting of the medical men of the Borough of Devonport and Stonehouse, Mr. Tripe in the chair, which was respectably attended, and at which the usual resolutions were passed.

We have also notice of a large and respectable meeting of the Gloucestershire Medical and Surgical Association, held on the 4th inst.—Dr. Hardwicke Shute in the Chair—the resolutions passed at which are all more or less in favour of the bill—that is to say, they do not fly in the face of the Government measure altogether, but begin by approving of each principle, and then propose amendment; they agree, and then they differ. The 1st resolution is to this effect: "That this meeting desires to express its high satisfaction that the Government has at length brought the state of the medical profession under the consideration of the legislature, and is fully prepared to assent to the general principles of the measure recently introduced by the Right Hon. the Home Secretary."

The 2d resolution is the following: "That while the proposed establishment of a Central Council of Health and Medical Education appears likely to promote the respectability and protect the interests of the medical profession, this meeting is of opinion, that the constitution of that Council, as laid down in the Government bill, needs further consideration; and more particularly as regards the relative proportion of Councillors to be elected by the profession, and that the measure would be greatly improved by permitting the medical practitioners of the provinces to elect the two representatives whom Sir J. Graham has proposed to appoint from the rural districts."

The 3d says: "That as one of the most important features of the bill is the abrogation of existing penalties on unlicensed practitioners, this meeting admits that, in the present state of public opinion, any direct legislative interference with unqualified practitioners would not be unattended with difficulties; but has, nevertheless, reason to believe that these difficulties have been much over-rated, and that if fairly met, they will not be found to be insuperable, and, therefore, that the principle of protection against unqualified pretenders may be more extensively applied than is apparently contemplated by the bill."

The 4th: "That this meeting would respectfully submit to the consideration of the Government, the propriety of such indirect discouragement of illicit

practice as would be effected by abolishing the present obnoxious system of stamped and patent medicines, and by prohibiting, under severe penalties, the advertisement of secret remedies, now carried on to an extent alike injurious to public health, and offensive to public decency."

There are various ways of being pleased, and various modes of expressing dissent. We have done that openly which our brethren at Gloucester have done more covertly. Have our friends there had the assistance of any associate of the celebrated society instituted by Ignatius Lloyola, in drawing up their resolutions?

It is long since we have heard anything of the

BRITISH MEDICAL ASSOCIATION,

with Dr. Webster at its head; it is alive, however, and sends us what follows.

At a recent meeting of the Council held to take into consideration the Medical Bill of Sir James Graham, it was unanimously resolved:—

I. That the Bill is exceedingly defective and illiberal in many respects, and if it should be passed by the legislature in its present state, would be highly injurious to the public and the profession.

II. That it nevertheless recognises and contains several important provisions founded on the great principles of Medical Reform, for which the British Medical Association has been strenuously contending since 1836; and that it would be inexpedient and unwise recklessly to oppose the entire measure, because it is defective in some respects, and illiberal in others.

III. That the chief defects of the Bill are:—

1st. The want of the true representative principle in the election of the ruling bodies in the medical corporations.

2d. The absence of any provision for uniting the medical profession into *one body or faculty* of medicine, upon the acknowledged principle that medicine and surgery, with their various subdivisions (for the public convenience) are but parts of *one science*, which can only be effectually taught as a whole.

3d. The want of *all effective protection* to the public and the profession,

against the evils arising from the practice of unqualified persons.

4th. The unjust and illiberal constitution of the proposed Council of Health and Medical Education, in which the great majority of medical practitioners would have no voice, while the influence of the Home Secretary and the Government would be overwhelming.

5th. The obvious effect of the Bill, in connection with the charters recently granted to the Colleges of Surgeons, would be to degrade general practitioners, and improperly to elevate pure surgeons and physicians.

6th. The omission of any summary and inexpensive mode of enforcing penalties (such as by information before two of Her Majesty's Justices of Peace), against those persons assuming medical titles, or falsely pretending to be on the proposed register.

7th. The absence of any defined method of sufficiently making known to the public the names of registered practitioners.

IV. That the features of the bill which the Council recognize with satisfaction, and which if properly carried out would be beneficial to the profession as well as to the community, are the following.

1st. The appointment of a general Council of Health and Medical Education, which if justly constituted and judiciously worked, implies a greater concern for the public health than government or parliament have hitherto evinced.

2d. The legitimate connection for the first time of the profession with the government, and thereby much readier access to Parliament and to the ministers of the crown, through the Secretary of State for the Home Department.

3d. The general superintendence of medical education, with uniform tests of qualification for practice.

4th. The erection of the Council of Health into a court of appeal against any oppressive or unjust acts which may be committed by the medical corporations, and which have hitherto passed with impunity and without redress.

5th. The general registration of all qualified practitioners.

6th. The right to practise in all parts of Her Majesty's dominions, after being duly qualified and registered.

7th. The provision against the as-

sumption of medical titles by unregistered practitioners.

8th. That none but registered practitioners can legally recover charges for medical or surgical advice, attendance or operations, or for medicine prescribed or administered.

V. That the Council having found from previous experience, that all former attempts at medical legislation by individual members of Parliament have failed, and this Association having by deputation and correspondence strongly urged upon Sir James Graham the propriety of Government undertaking the conduct of a bill to regulate medical qualifications and practice, upon liberal and broad principles, are of opinion that no measure would be likely to pass unless introduced by Government, and therefore, that it is the duty of all medical reformers to endeavour to obtain such modifications of Sir J. Graham's bill, that it may be calculated to give satisfaction to the profession, and to confer the greatest amount of benefit on the public.

VI. That any Medical Bill which does not contain power effectually to restrain ignorant and unqualified pretenders from practising the healing art in any of its departments, will be most deceptive and injurious to the community, and most unjust to medical practitioners, who have at much cost of time and money qualified themselves for the service of the public.

Signed, on behalf of the Council,
GEORGE WEBSTER, President.

Exeter Hall, Oct. 7, 1844.

LONDON HOSPITAL.

Hydrocele of the Hernial Sac—cured by external treatment.

JOSEPH BOLTWOOD, a shoemaker, aged 58, came under the care of Mr. Curling, March 25th, on account of a swelling in the left groin. There was a tense tumor, the size of a hen's egg, just below the external abdominal ring, and about two inches above the testis, from which it was quite separate. It received no impulse on coughing, fluctuated indistinctly, and was very tender when handled. The spermatic cord could be traced from the testis to the back part of the swelling. The tumor was defined below, but extended by a broad neck into the inguinal canal. The patient was placed in a dark corner of the room, and the swelling was examined with a candle, and found to be transparent; but its want of prominence, and

small size, rendered this mode of examination very difficult. He stated that the swelling first came about two years ago, after a blow in the groin which he received by running against a post. It came gradually in the course of a month after the accident, and has never since disappeared. He was seized, three days before he came to the hospital, with vomiting, and pain which extended from the tumor into the abdomen; and pain was still felt on pressure in the vicinity of the abdominal ring. He had experienced a similar attack about nine months previously.

Mr. Curling remarked that there was some difficulty in this case in determining whether the swelling was an encysted hydrocele of the cord, or a hydrocele of the hernial sac. He came, however, to the conclusion that the case was a hydrocele of the hernial sac; a piece of intestine or omentum being adherent at the ring, and slightly inflamed, pain being experienced just above the tumor. The pain in this situation, and the diffused character of the upper part of the swelling, induced him to think that it was not an encysted hydrocele of the cord. The patient was directed to apply eight leeches to the upper part of the swelling, and afterwards a cold lotion, to take a dose of castor oil, and to remain at rest in bed.

28th.—The swelling was less in size and not so tender, and he was relieved of the pain in the abdomen. Five more leeches to be applied, and the lotion continued.

April 3d.—The swelling further diminished, and all tenderness removed. A blister to be applied. From this period the swelling continued steadily to decrease, and on the 17th all the fluid had disappeared. On placing the hand on the groin, a distinct impulse, arising from a slight protrusion, was felt when the patient coughed. A truss was applied; this restrained the protrusion, and the patient was discharged cured, without the slightest swelling remaining in the course of the spermatic cord.

Varicocele treated by Compression.

William Coomber, aged 21, a light porter, enjoying tolerable health, though occasionally subject to dyspepsia, came under the care of Mr. Curling, as an out-patient, on the 17th of July, in consequence of suffering from a considerable varicocele on his left side. He had been subject to it for more than nine months. He complained of experiencing pain in the left side of the loins, and an uneasy aching sensation in the testis, which were increased by exercise, and by lifting weights. The scrotum was lax and pendulous, and the left testis was about one-third less in size than the right. He applied to a surgeon six months ago, and was recom-

mended to wear a truss. He wore one of the common description for four or five months, but found no relief from it. He was advised, therefore, to discontinue it, and to use a suspender. He had worn the latter for the last five or six weeks, but the varicocele continued to get worse. The *moe-main lever truss* was ordered to be applied; the scrotum to be sponged night and morning with cold water; the bowels to be relieved occasionally by a mild aperient.

22d.—He had worn the truss constantly for the last six days, and felt greatly relieved, so that he was able to walk about without suffering any uneasiness. The varicocele appeared slightly reduced in size.

August 28th.—The patient stated that he continued to derive relief from the truss, and had become accustomed to the pressure of it, so that it caused him no annoyance. His appetite and digestion were improved, and he had returned to his employment Discharged.

THE PHYSICAL SOCIETY OF GUY'S HOSPITAL.

ON Saturday evening, the 5th instant, the Physical Society of Guy's Hospital, the oldest of all the medical societies established in London, held the first meeting of its 72d session; Dr. Babington, the senior President, in the chair.

The President, in his opening address, alluded to the leading incidents in the history of the society, the successive alterations in its internal arrangements, and the many eloquent and distinguished men which it had numbered among its members, both within and without the pale of the profession, particularly alluding to the eloquence of Thelwall, Drs. Hosack and Currie, and the unfortunate but misguided Robert Emmett, who suffered the extreme penalty of the law for engaging in the last rebellion in Ireland, —all of whom, he believed, had written papers for this society. He dwelt upon the advantages which societies like this produce to all ranks and ages, especially now that they are framed on less comprehensive principles, and confined to members of particular professions, and more especially upon the excellent test they afford to writers, of arriving at the real value of their particular views. Submitted in the form of a paper to such an ordeal as the experience of the older, and the improved scientific knowledge of the junior members afforded, a tolerably correct estimate of the value of every view and suggestion, might be obtained, which was often found less than the original estimate.

A paper by Mr. T. Wilkinson King was then read, containing, amid *multa alia*

some peculiar views on the capillary circulation of the face and head, and its influence on diseases of these parts. The author seemed to regard the circulation in the capillaries as entirely independent of the influence of the nervous system, and solely dependent on position and physical conditions. An animated discussion controverting this notion was elicited, in which Sir George Lefevre, Dr. Addison, Mr. Hilton, and other members, took part, till the hour of adjournment, half-past nine, arrived; when the thanks of the society were voted to Mr. King for his communication, and the President adjourned the meeting, with the announcement that Dr. Ashwell would bring forward the subject of Fibrous Tumors of the Uterus at the next meeting, which will take place on the 19th instant.

MEDICAL ETHICS.

DEATH OF THE REV. DR. ARNOLD.

IN the very interesting memoir of this distinguished scholar, a most affecting narrative is given of the manner and circumstances of his decease. It is my wish, on this occasion, only to draw attention to the conversation between the patient and his medical friend.

Between 5 and 6 o'clock on Sunday morning, Dr. A. awoke with a sharp pain across his chest. He complained of this to his wife, and mentioned that he had it slightly the preceding day. The pain increased, and seemed to pass from the chest to the left arm, so that a suspicion arose in the mind of Mrs. A. of its being an attack of angina pectoris. His sufferings continued severe, although variable as to the degree; and it was evident from the solemnity of his manner, though habitually a devout man, that he had the impression that his seizure was a perilous one. His medical attendant was sent for. At a $\frac{1}{4}$ to 7, Dr. B—, (son of the usual medical attendant) entered the room. Dr. A. was then lying on his back; his countenance much as usual. His pulse, though regular, was very quick, and there was cold perspiration on the brow and cheeks; but his tone was cheerful. "How is your father?" he asked, on the physician's entrance: "I am sorry to disturb you so early; I knew that your father was unwell, and that you had enough to do." He described the pain, speaking of it as having been very severe, and then said, "What is it?" While the physician was pausing for a moment before he replied, the pain returned, and remedies were applied till it passed away. He asked again, what it was? and was answered, that it was spasm of the heart. He exclaimed, in his usual manner of recognition, "Ha!" and then, on being

asked, "If he had ever in his life fainted?" "No, never."—"If he had ever had difficulty of breathing?" "No, never."—"If he had ever had sharp pain in the chest?" "No, never."—"If any of the family had ever had disease of the chest?" "Yes, my father had; he died of it."—"What age was he?" "Fifty-three."—"Was it suddenly fatal?" "Yes, suddenly fatal."—He then asked, "If disease of the heart were a common disease?" "Not very common."—"Where do we find it most?" "In large towns, I think."—"Why?" (Two or three causes mentioned.) "Is it generally fatal?" "Yes, I am afraid it is."

The physician now left the room to obtain remedies, and on his return they were applied. There was a slight return of the spasms, after which Dr. A. said, "If the pain is again as severe as it was before you came, I do not know how I can bear it." He then fixed his eyes upon the physician, who rather felt than saw them upon him, so as to make it impossible not to answer the exact truth; repeated one or two of the former questions about the cause of the disease, and ended with asking, "Is it likely to return?" and on being told that it was—"Is it generally suddenly fatal?" "Generally." On being asked whether he had any pain? he replied that he had none, but from the mustard plaster on his chest; with a remark on the severity of the spasms in comparison with this outward pain; and then, a few moments afterwards, inquired what medicine was to be given;—and on being told, answered "Ah! very well."—The physician, who was dropping the ludanum into a glass, turned round and saw him looking quite calm, but with his eyes shut. In another minute he heard a rattle in the throat, a convulsive struggle,—and animation ceased.

It is very far from my wish to impugn the conduct of Dr. Arnold's medical friend on this great emergency. He might have been a man whom no evasion would satisfy; and direct falsehood never can be justified. I am very far from sanctioning that false delicacy which governs many practitioners in their intercourse with the sick, and by which the peril of the case may be known to the family and friends, but not to the patient, though to him the knowledge is very important, that he may arrange his temporal affairs, and all-important, that he may prepare for eternity. Nevertheless, it appears to me that it would be very sad if the proceedings in the case before us were drawn into a precedent. The symptoms of angina pectoris are so evident, that very few questions are requisite at the moment, and information at all likely to agitate should be sought from friends. Without any previous intimation, who can tell, in a first seizure,

whether or not it is a case of functional disturbance, not one arising from ossification of coronaries, or degeneration of muscular structure? but in either case, *under the paroxysm*, the mind should be kept as undisturbed as possible. Patients usually attach much importance to *spasm*. I do not see the propriety of telling a patient, at the time, that he had *spasm* of the heart, and not that there was "some disturbed action." I cannot see, in such a case, and at such a moment, that it would be requisite to draw from the lips of a patient information as to hereditary tendency, or to tell him that these seizures were usually suddenly fatal. I would rather direct thought to the other side; assure the patient that these attacks, though serious, were often unconnected with organic disease—functional disturbances, frequently recovered from, and sometimes confined to a single seizure. The emotion of a really good man (and there is no question of the piety of Dr. Arnold), when suddenly called to view himself as a dying man—about to depart from his beloved family, about to be severed from things deeply interesting him, his mind taking a rapid and wide glance at the consequences of his dissolution—is already such as to perturb the soundest heart. How greatly must that emotion perplex the movements of an organ previously so disordered or diseased, as to have placed life in the most imminent jeopardy? It is not difficult so to regulate phraseology, that a calming persuasive tenderness shall be combined with fidelity; but in the report, quoted from the memoir, it seems to me that there is a bluntness which fidelity does not require.

W. COOKE.

39, Trinity Square,
Sept. 24, 1844.

FORMATION OF BONE.

M. FLOURENS, whose inquiries on this subject, published in 1842, are so well known generally, has lately made a farther communication to the Academy of Sciences on the subject. M. Flourens maintains—

1st. That bone is formed in the periosteum. 2d. That bone increases by the superposition of the external layers. 3d. That the medullary canal enlarges by the absorption of the internal layers of the bone. The experiments by which he now seeks to demonstrate the first of these propositions were performed upon dogs. In several of these animals a portion of a rib was removed, the bone properly so called only being taken away, the periosteum, detached from it, being left. After several days a small bony nucleus, which increases gradually, and finally connects the two ends, is found in the periosteum, left between the two cut extremities of the rib. The preparations

exhibited shewed this process of preparation in its different phases, and the formation of the new bone in the periosteum; in the first instance, it is now completely isolated, and distinct from the old bone; it is only by its progressive growth that it finally reaches the extremities of the old bone, and connects these with one another. The 2d proposition, viz. That bone grows by the superposition of external layers, is supported by the following experiments made upon rabbits and dogs:—The tibia in several of these animals having been laid bare, the periosteum was divided, and a piece of platinum wire was thrust between the periosteum and the bone, and then bent into the form of a ring. The bone continued to grow, and as it grew, it covered the ring of platinum wire with its new layers. In the same way the 3d proposition was demonstrated by preparations, which shewed that the internal layers of long bones were successively absorbed, and that this successive absorption was the sole cause of the enlargement of the medullary canal. M. Flourens' paper wound up with some observations on the absorption of portions of the bone of one animal, placed in contact with, or inserted into, the bone of another animal. A portion of the rib of a rabbit, for example, put into a hole in the tibia of a dog, soon shews signs of absorption, of erosion, and these are by so much the more decided as the experiment has been continued for a longer time.—*Académie des Sciences*, 30 Sept.

[We have always looked upon the experiments of Dr. Davy and Mr. Gulliver, as related in one of the fasciculi of Pathological Anatomy illustrative of the Pathological Collection at Fort Pitt, Chatham, which may be styled the *converse* of those of M. Flourens, last alluded to, as far more extraordinary. Dr. Davy and Mr. Gulliver found that they could frequently procure the adhesion of a piece of bone of a creature that had long ceased to live—a portion of a human tibia, for example, sawn from a bone that had lain for years in a drawer or cupboard—with the bone of a living animal: a part that had been dried and dead for a dozen years, placed in contact with an analogous living tissue, actually recovered its vitality, and became an integral part of a living animal!—*ED. GAZ.*]

POISONING WITH MORTAR OR QUICKLIME.

A BOY, three years of age, playing in a garden where builders were at work, tasted some slaked lime, and finding it sweet, he ate a considerable quantity. The parents observed him; and having taken a quantity of lime from his mouth and nose, sent for me-

dical assistance. The child was ordered an emetic of ipecacuanha, and after large doses vomited up a mass of grey stuff, like mortar. Almond emulsion was then ordered. The night was restless; the child was feverish, drank frequently, refused food; the lips were of chalky whiteness; the mouth showed several blisters; the belly was hot, and painful on pressure; the alvine evacuations were bloody. A few leeches were now applied to the abdomen, &c. The child at last did well.—*Dr. Lion, in Casper's Wochenschrift*, No. 33.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

Gentlemen admitted Members on Friday, Oct. 4.—E. Moore.—T. Batt.—J. F. Jones.—G. Yates.—T. Evans.—J. Black.—J. P. Smyth.

APOTHECARIES' HALL.

Gentlemen who have obtained Certificates, Oct. 3.—J. Y. Godwin, Sherborne, Dorset.—T. Willey, Leicester.—T. C. W. Cooke, London.—T. B. Thwaites, Appleby.—D. Hamilton, Ipswich.—R. Tilton, Dursley.

MORTALITY OF THE METROPOLIS.

Deaths from all causes registered in the week ending Saturday, September 28.

Dropsy, Cancer, Diseases of Uncertain Seat	114
Diseases of the Brain, Nerves, and Senses	136
Diseases of Lungs and Organs of Respiration	234
Diseases of the Heart and Blood-vessels	20
Diseases of Stomach, Organs of Digestion, &c.	72
Diseases of the Kidneys, &c.	8
Childbed	7
Parametria	0
Ovarian Dropsy	0
Disease of Uterus, &c.	2
Arthritis	1
Rheumatism	4
Diseases of Joints, &c.	2
Carbuncle	0
Phlegmon	0
Ulcer	0
Fistula	0
Diseases of Skin, &c.	1
Old Age or Natural Decay	54
Deaths by Violence, Privation, &c.	44
Small Pox	37
Measles	15
Scarlatina	85
Whooping Cough	11
Croup	6
Thrush	8
Diarrhoea	23
Dysentery	1
Cholera	1
Influenza	0
Ague	0
Remittent Fever	0
Typhus	34
Erysipelas	11
Syphilis	0
Hydrophobia	0
Causes not specified	1

Deaths from all Causes 932

WILSON & OOLIVY, 57, Skinner Street, London.

THE LONDON MEDICAL GAZETTE,

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WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

FRIDAY, OCTOBER 18, 1844.

LECTURES
ON THE
NATURE AND TREATMENT OF
DEFORMITIES,

*Delivered at the Bloomsbury Square
Institution.*

By R. W. TAMPLIN, F.R.C.S.E.
Surgeon to the Institution.

TREATMENT OF TALIPES VALGUS.

THE method for the treatment of valgus, which I have usually adopted, is as follows. When the contraction of the muscles is rigid, both in congenital and non-congenital cases, section must be had recourse to; at least I would advise it. In congenital cases, as far as my observation goes, it is invariably necessary, although the deformity may be slight, and the foot is easily brought into and held in position. We have patients now standing on the books, in whom, from a few weeks after birth, the most careful and constant mechanical means were adopted, and the foot during the time these means were applied was held in position; but the moment the feet were released from the instrument the deformity returned: even after a period of twelve to eighteen months, and where I have since divided the muscles contracted, viz. the peronei and common extensor of the toes, a cure of the deformity has very quickly followed, and all tendency to contraction has subsided. I have operated on a child five weeks old, and after a month's treatment, the foot did not, when taken out of the instrument, return to its malposition. Therefore there is no doubt in my mind as to the mode to be adopted. The operation is unattended with pain, or comparatively so, as the child will take the breast immediately afterwards, and no ill consequences are to be anticipated with the most ordinary care; therefore there is no argument against the propriety of operating. After you have

thus overcome the resistance of the muscles, the placing and maintaining the foot in position at this early age is an easy matter, as you have no additional obstacle or resistance, and the ligaments grow in their natural position; and the muscles are also enabled to act in their normal direction. The overcoming and preventing the contracted condition of the muscles at this early age is of great importance. The mode of operating is as follows. Let an assistant with one hand hold the leg firmly, and with the other adduct forcibly the foot, which renders the peroneus longus and brevis muscles tense. The leg lying on its inner side, the outer side being upwards, you then with the forefinger of the left hand feel for the tendons and also the fibula. You will generally find the tendons raised above the level of the fibula, and a space between them and the bone. You then introduce a sharp-pointed knife between the bone and tendons, with its flat surface to the bone, about an inch and a half or two inches above the joint, to about half an inch in depth, *i. e.* beyond the external edge of the fibula, or as far as your judgment will direct you; turn the knife with the sharp edge to the tendons, and cut them transversely. This is my method of operating, and the one which, I think, you will find the best. You can adopt a plan I have sometimes witnessed, namely, that of passing the knife behind the tendon and cutting from within outwards upon the fibula; this method, however, is less certain, and you run the same risk as in the division of the posterior tibial tendon, of breaking the point of the knife on the bone. As soon as the tendons are divided, a sudden jerk will be communicated to the hand of the assistant, and if both are effectually divided a double jerk will be felt, the one following the other immediately; especially in adult cases. In infants the muscular fibre extends much lower, and this distinct sensation is not felt, although if divided a sense of yielding must be felt. After dividing the peroneus longus

and *brevis* muscles, you proceed to divide the *extensor communis digitorum* and the *peroneus tertius*, which is done in the following manner. Let the patient lie on his back or side, and let the assistant adduct the foot as in the former instance. Introduce a sharp-pointed knife to the inner side of the *extensor communis*, just where it passes over the ankle-joint; pass it beneath these tendons and the *peroneus tertius*, with the flat surface towards the tendon: as soon as you have inserted the knife behind the whole of them turn the sharp edge towards the tendons, depress the handle, and divide them: from their prominent position you will have no difficulty in feeling them, or ascertaining if they are completely divided. You then place a piece of lint on the points of puncture, and secure it with strapping. Bandage the foot from the toes upwards. Let the foot be kept at rest in the horizontal position and (as in the method of treatment of the other cases I have before described,) let it be kept warm: at the end of three or four days you may remove the bandage and strapping, and you will find the puncture healed. You then commence the mechanical treatment, which consists in gradually adducting and depressing the foot, at the same time that you support the arch, so that the new uniting medium becomes stretched at the same time that you are pressing the bones of the foot forming the arch into their normal position. I have found a splint, extending from below the knee to the inner ankle, with a **spring** attached at its extremity, to extend **the length of the foot**, very useful, the spring **having** a soft pad attached, directly opposite and rather beneath the *os-scaphoides*. The splint being well padded, and carefully bandaged on the leg on the inner side, then apply a strap, or adhesive plaster, round the extremity of the spring and the anterior portion of the foot, gradually tightening it as much as the feelings of the patient will admit of: in this way the ankle may be restored with great comfort to the patient, as the pressure and counter-pressure are equalized, and all danger of sloughs from undue pressure avoided. In infants you will find it of the greatest possible advantage. As soon as you have raised the scaphoid bone, and restored the arch, commence the flexion of the foot with Scarpa's shoe, and when beyond the right angle, let the patient have a boot with a cork sole and a support attached, so that he may be enabled to take exercise, at the same time that the ligaments of the foot are gaining strength. In the most severe cases, where the anterior tibial muscle is also contracted, you will find it necessary to divide the tendon of that muscle at the same time, in the manner described in a former lecture; and in severe congenital cases, as represented in fig. 2, p. 36, when

the deformity has been allowed to exist for years without any attempt having been made to relieve it, you will find every muscle surrounding the joint contracted. The following is an instance:—A patient, 15 years of age, was born with this deformity in both feet, and about two years since was operated upon and treated mechanically without relief. Upon examination, the feet presented the appearance represented in fig. 2. The patient was totally unable to walk, from the great pain occasioned when the feet were subjected to the weight of the body. Upon attempting to adduct the feet, the *peronei* and common *extensor* were rendered extremely tense; upon attempting to flex the foot, the *tendo-Achilles* was also tense; and upon an attempt to depress them, the anterior tibial and *extensor proprius pollicis* were also tense, there being the smallest possible amount of motion in the joint, and that of an unyielding character. I therefore proposed the division of the tendons of the whole of these muscles as the only prospect of relief, which was assented to. I first divided the *peroneus longus* and *brevis*, then the *extensor communis digitorum*, and *peroneus tertius*, afterwards the anterior tibial and *extensor proprius pollicis*, and lastly the *tendo-Achilles*. Lint and bandages were applied, and allowed to remain on a week, the patient having suffered no pain beyond that immediately following the operation. At the end of that time I applied one of Scarpa's shoes, and flexed and extended the foot alternately night and morning, so that the uniting medium of each tendon might be acted upon, the foot being adducted the whole time. At the end of three weeks the motion of the joint was restored perfectly, and the patient possessed the power of flexing and extending it at will.

This case is of great interest, as it would appear that the *gastrocnemius* had become contracted from position, the feet being at right angles; and also, that the means adopted were those only which could have succeeded, as the division of one without the others would have effectually prevented, as in fact it had done, the restoration of the feet to their normal position, or the return of the motion of the joint. I have never seen this condition in the infant afflicted with this deformity, and can account for this additional contraction only by the constantly maintained position at right angles. Should you, therefore, meet with such a case, I would advise your adopting a similar plan of treatment.

The time occupied in effecting a cure will vary according to the extent of the displacement and rigidity you may have to contend with. In infants or young children, it will occupy from four to six weeks: in the adult deformities, however,

it will require three or four months of careful mechanical treatment before the bones are brought into their natural relative position: as soon, however, as this is accomplished, the patient will be able to flex and extend the foot with the greatest freedom and without pain, and with the boot and support I have before alluded to, will walk with great ease and comfort. That of the gravedigger was a most severe case of this distortion; previous to the treatment he had in one foot no motion—in the other no available motion of the joint at all, and was ultimately compelled to relinquish his employment, the effort of walking but a short distance occasioning great pain. The moment the feet were restored, he possessed free motion in both feet. Three months, however, after treatment, without any assignable cause (for he suffered scarcely any pain, and none the latter part of the time), he was attacked with acute meningitis, which rendered it necessary to remove the apparatus. Leeches, blisters, and cold lotions, were applied, and doses of calomel given him every two hours: the mouth became affected in the course of forty-eight hours, from which time he slowly recovered. The convulsive twitchings of the muscles, however, remained for a fortnight afterwards. I can attribute this casualty only to his good living, and leading an idle life. The boy was suffering neither mentally nor bodily; but he was in fact highly pleased at his prospect of cure. He left the charity completely recovered. Had any unpleasant result followed, there is but little doubt that it would have been attributed to the operation, and any casualty occurring, which is common to all operations and treatment of every disease, would, as you must perceive, prejudice the charity in its early existence. It will be necessary for the patient to wear a support for at least twelve months, or at least until the arch of the foot is maintained when subjected to the weight of the body. Let him never be without the support at night for some time, following the active treatment, as the more constantly and uninterruptedly the bones are kept in apposition the more speedy and certain will be the ultimate recovery. You cannot be too particular about this point, as by any neglect either on the part of the attendant or on that of the patient or friends, a relapse will certainly be the consequence.

I must now call your attention to those deformities which are considered to be of a compound nature, and which are derived from a union as it were of talipes equinus with either talipes varus or talipes valgus, and are designated by the respective terms of talipes equino-varus, or talipes equino-valgus. I do not myself see the necessity for multiplying terms; but as it has been done by others to distinguish the various forms of the

deformity, it is perhaps as well to adhere to them. By talipes equino-varus will be understood an elevation of the heel from contraction of the gastrocnemius, and inversion of the foot from contraction of the anterior or posterior tibial, or both; the patient walking on the outer and inferior surface of the fifth metatarsal bone. In fact

FIG. 5.



An illustration of talipes equino-varus in its less severe form.

I see no difference in the character of this deformity from varus, excepting in degree. Talipes varus being congenital and non-congenital; talipes equino-varus has this distinction also—the same muscles are contracted. The same treatment is necessary, so that it is useless to enter more fully into the description of this deformity. Talipes equino-valgus, however, presents this difference—that in *true* talipes valgus you find no contraction of the gastrocnemius muscle in infants, although it becomes so from position; in talipes equino-valgus you have the contraction of this muscle; so that it consists in the elevation of the heel or contraction at right angles, combined with a sinking of the arch and more or less eversion of the foot; you have the same anatomical condition of the bones of the foot—this deformity is non-congenital. The cause of talipes equino-valgus is irritation and disease of the brain or spinal chord, producing paralysis of the anterior and perhaps the posterior tibial muscles; the cause is generally attributed to the irritation of teething. The heel is seldom elevated beyond a right angle; the arch of the foot is gone, and the peronei (longus, brevis, and tertius,) as well as the common extensor, will be found contracted; the anterior portion of the

FIG. 6.



An illustration of talipes equino-valgus.

foot everted, and the patient walking on the inner edge of the foot, but more especially on its anterior surface on the ball of the extremity of the great toe, producing, as the patient throws the weight of the body on the foot in walking, a great and constant strain on the internal lateral ligaments, which at times is so weakened and elongated as almost to allow the astragalus to fall out of it, which, if the articular cavity admitted of it, would unquestionably take place: the external lateral ligaments become proportionably contracted, and offer more or less resistance to the restoration of the foot to its right position: here, as in valgus, where this extreme condition of parts exists, the degree of obliquity of the astragalus renders the ankle capable of but very little motion; most frequently you will find paralysis of the anterior tibial muscle to exist. Occasionally, however, as in all cases where paralysis has been the primary cause, you find a partial restoration of the functions of the muscle; there will be also more or less atrophy of the limb, and a reduced nervous vitality of the skin, as well as other tissues. We now come to the

Treatment.—If there is decided contraction, and the foot cannot be completely adducted by the hand, you must have recourse to the division of the tendons,—the mode of doing which, and the precautions necessary to be observed, I have previously fully detailed to you. It will be better to divide the whole of the tendons at one operation; and, after the punctures are healed, to proceed slowly with the mechanical treatment; first directing your attention to the adduction of the foot, and extension of the new connecting matter of the divided tendons: after this is

accomplished, proceed with the flexion of the foot, and as soon as it is brought into the flexed and adducted position, let the patient have a boot with a support attached on the outside of the leg, with a strap passing over the ankle, to hold the foot in position during the time the lateral ligaments are gaining strength; you will also require the raised cork in the sole to support the arch of the foot. If the originally paralysed muscles have recovered their power of action, you may anticipate a perfect restoration eventually, if proper attention be given to keeping the foot in position. If, on the contrary, paralysis of the anterior tibial muscle still exists, you can do no more than remove the deformity, and rest satisfied with the artificial support. The ligaments in this instance will contract, and hold the foot in the proper position, so that the patient will be enabled at times to walk tolerably well in a common boot. In a case I operated upon 18 months since, of a young gentleman, 10 years of age, paralysis of the anterior tibia muscle existed and still exists; there was an extreme relaxation, a looseness of the joint, especially on the internal side, appearing as if the internal lateral ligament was altogether absent. The peronei, the common extensor, and the tendo-Achilles, were divided; which, as a matter of course, both at the time of the operation and for some time afterward, increased the weakness. At the end of twelve months, by continued attention to position, the foot presented a natural appearance; all trace of deformity ceased to exist; and he was able to walk without any support, at the same time feeling a sense of weakness; in the after part of the day he wore a shoe or boot, from which he experienced no inconvenience. There can be no doubt but that if he were to omit the support altogether, the deformity would return, as the balance of power could not be maintained except by artificial support; you cannot, therefore, pay too much attention to this point.

Although I have described *true* talipes valgus as existing without contraction of the gastrocnemius, and talipes *equinus* valgus as being thus distinguished from it, yet I must not have you regard this as an absolute rule, for in the most severe cases of *true* talipes valgus, where there is none or very little motion in the joint, the gastrocnemius has appeared to me to be slightly contracted, and the case detailed was so; not sufficiently, excepting in the case mentioned, to warrant a division of the tendon, but sufficiently so to prevent the full amount of flexion. Should you find it contracted sufficiently to prevent the foot being fixed beyond a right angle, I would advise division of the tendon; but in adult cases not until after the adduction of the foot is accomplished.

ON THE
TRANSFORMATION OF PUS CELLS
INTO A MUCOUS OR FIBROUS
TISSUE.

BY WILLIAM ADDISON, F.L.S.

[Vide page 727 of last vol.]

I. *Normal Nutrition.*

THE experiments related in the former parts of this memoir were chiefly designed for the purpose of bringing the facts upon which my views of the mode in which the colourless cells of the blood administer to the formation of the tissues and the secretions, are based, out of the domain of the microscope, and of placing them as far as possible within the reach of all who feel an interest in their truth.

I have long been in the habit of comparing what I see through an object-glass of high power, with what I can see by the naked eye, or through a common, or a Coddington, lens, and I find that habit improves the perception wonderfully: thus, the fibrous tissue of the saliva (Exp. 7, ante; vide p. 691 of the last volume of the GAZETTE) may be readily seen by the naked eye, and in a proper light, glistening like tendon; it is admirably shewn with a Coddington lens; the epithelial scales, and the saliva cells, are readily seen lying among the fibres. The colourless cells of the buffy coat of the blood are readily distinguished, and were first seen by me through a Coddington lens: the fibrillation of the fibrine may also be seen through this simple magnifier; and so, indeed, may the dissolution of pus-cells in liquor potassæ, and several other of the facts I have related; lastly, the adhesion of the colourless cells to the tissue in the web of the frog's foot requires only a magnifying power of 150 diameters linear; hence, therefore, those persons who do not possess a microscope, or who possess one of only moderate pretensions, have it in their power to form a judgment on the question, whether or not I have been confounding facts with inferences, or visible things with speculations.

EXP. 10.—One-third of a cupful of muco-purulent expectoration from a patient in consumption, thick, white, opaque, and very stringy or elastic, was mingled with half its bulk of

liquor potassæ; the two were well stirred and beaten together; they formed a transparent, greenish-looking, plastic material, the whole of which was suspended on the blade of a pen-knife. This plastic material, mucus, or fibrous tissue, had the same visible character and mechanical properties as that resulting from the mixture of potass with pus from an abscess in the thigh; and the experiments before related were repeated with it. There were, however, some slight differences: for example, the plastic material in this case having been allowed to remain in the cup for three days, was found at the end of that period to have undergone a separation into an opaque, jelly-like, trembling, and fibrous clot, and a yellowish limpid fluid, having experienced a change analogous to that by which the serum separates from a coagulum of blood*. The clot was of a yellowish-brown colour, and although more easily torn than the plastic mucus from which it came, yet it still presented evident marks of a fibrous structure. The clot was now broken up, and the fragments were thrown into a jar of clear pump water; in four or five hours all colour had departed from them; they had swelled a little, and become of a pure and beautiful ivory white, semi-translucent at the edges. A portion of this white matter, resembling blanc-mange, was taken from the water and placed in strong acetic acid; it soon became whiter, harder, and more friable (No. 1). Another portion, immersed in liquor potassæ, soon became more transparent, more elastic, and mucus-like (No. 2). On adding a little water to No. 1, and applying heat, the fragments of white matter shrivelled up, became hard, tubercle-like, and very friable: they were not dissolved (No. 3). On adding a little water to No. 2, and applying heat, the fragments of white matter were redissolved into a transparent, elastic, white-of-egg-like matter (No. 4). On adding acetic acid to the white-of-egg-like matter, No. 4, it became fibrous, white, and opaque, forming at first a delicate membranous expansion, which, on briskly stirring the fluid, was broken up into white flakes or clots. These results appear to me to shew that the mucus or plastic matter expectorated from the

* Vide MEDICAL GAZETTE, Vol. i. 1840-41, p. 471.

mucous passages connected with the mouth is identical with that resulting from the rupture of pus-cells taken from an abscess in the thigh, excepting only those differences before noticed, and which might be anticipated, between a mucus formed in the living body, and one formed by artificially rupturing pus cells; and they corroborate the conclusion, that colourless blood cells, mucus-cells, and pus-cells, are different forms of the same elementary particles of nutrition.

It appears to me, then, to be demonstrable from my experiments, that the colourless elements or cells of the blood spontaneously transform themselves into an elastic fibrous tissue after their separation from the living structure; or into a plastic transparent mucus (another form of fibrous tissue) when treated with liquor potassæ.

It appears to me also to be demonstrable from my experiments, that a similar fibrous tissue is formed by the disintegration of pus-cells, and by treating the saliva with acetic acid.

The fibrous tissues from these sources appear to have mechanical properties, a physical character and texture, a microscopical or visible appearance, and a chemical composition, so closely allied to the fibrous tissues and membranes formed by the process of nutrition in the living structure, as to leave no reasonable ground for doubting that the latter result from the transformation or disintegration of cells.

If so, then it appears to me to follow as an inevitable conclusion, that there is no such thing in the living organism as a membrane secreting mucus (taking the ordinary meaning attached to the word secreting;) no such thing as an expanse of fibrous, or of any other tissue, so changing the nature or character of fluids, as they filter or transude through its fabric, that the fluid of the blood on one side becomes mucous by merely passing through it to the other; on the contrary, it appears to me that we can no longer hesitate to admit, that mucus, whether conformable to the type of a normal nutrition, or departing from it so as to constitute an abnormal or diseased element, can exist only in virtue of the life of cells. Are these cells generated in the tissue, or are they ulterior forms of blood-cells?

All the facts which I have witnessed support the conclusion that the cells from which mucus originates, are (or have been) blood-cells; the following being their normal sequence, or order of progression.

1st. *Isolated or free*.—Swimming in a limpid fluid; in motion through the vessels and capillary channels of the structure.

(*Blood, or blood-cells.*)

2d. *Stationary*.—United by a plastic element, or fibrous tissue, which they themselves produce.

(*Capillary walls and parenchyma secreting mucus.*)

3d. *Disintegrating*.—Separating and giving place to a fresh succession

(*Mucus and epithelial scales*)

If these conclusions be true with respect to mucus, then I believe them true also of all other secretions; and the sequential order above stated is therefore only another mode of stating my theory of nutrition, another way of viewing the subject. "In normal nutrition, the colourless blood-corpuscles adhere to the tissue forming the boundary of the blood channels; they pass into, and contribute to form, the tissue (the parietes of the capillaries), and are afterwards evolved or thrown off from the nearest free surface—a follicle, crypt, or duct—the epithelial scales and the mucus, or the secretions flowing from the follicles or ducts, being the result of the dissolution of the cells and tissues*.

Now if the sequential order, if the theory of nutrition here stated, be true, then it follows necessarily, upon reversing the series of events, that mucus and the other secretions, before their final transformation, must have been capillary walls, and the capillary walls must have been blood-cells.

What are the facts supporting this conclusion? 1st. An increased amount of the colourless blood-cells in all red or inflamed tissues, where an increased nutrition or secretion is going on: 2d, the identity of these blood-cells with the mucous and pus-cells, which are common to all parts of the structure: 3d, the phenomena displayed in the capillary blood-channels of the frog's foot.

4th.—The experiments related in the preceding parts of this investiga-

* Experimental Researches, 2d Series.

tion—and whether we interpret the phenomena of nutrition from the blood to the secretions, or from the secretions to the blood, we arrive at the same result—that the secretions, the organs of secretion, and the blood, are three marked and recognised stages of cell-transformation. Why cells in one portion of the organism should become bile, in another saliva, and in a third milk, can only be answered by answering the questions, why cells in one portion of a flower are green, in another red, and in a third blue; or why cells in one portion of a fruit—a peach, for example—form the kernel and prussic acid, in another the stone and gallic acid, and in a third the fleshy pulp and sugar.

Lastly, From the active motions visible in the interior of the cells of the blood, of mucus, and of pus, it appears that every molecule essential to a living function has a vital power superadded to its material form; that it is alone, and capable of independent movements; every molecule being alive, it follows that every cell containing them is a living object, and every cell being alive, every organ is alive; and if every organ, then the whole organism: wherefore the conclusion, that the vital power of the body is an aggregate power, susceptible of increase and diminution, and entirely distinct from the person from whom issueth the will*.

II. *Abnormal Nutrition.—Tubercles.*

Exp. 11.—Opaque and cream-like pus was taken from a chronic abscess; some portions were mingled with a few drops of liquor potassæ, and other portions were mingled with equal, double, or treble quantities of water, and then mixed with variable amounts of liquor potassæ. The plastic material, or mucus resulting, was in some instances perfectly transparent; in others, opaque in variable degrees, according to the varying proportions of pus, water, and liquor potassæ. The plastic matter could, with a little care, be spread out into transparent films of any degree of thinness, but it was so extraordinarily elastic that when left to itself it contracted again into a lump.

A piece of glass, four inches square, was procured, and the plastic material spread upon it with the edge of a card;

the glass was afterwards laid in a dilute acetic acid; the plastic matter then became white and opaque, and its elasticity was in a great degree destroyed. After this operation, it was scraped off the glass into water. In this manner, membranes, some of the utmost degree of thinness and transparency, others of a thick, leathery consistence, were formed. The plastic matter, on being submitted to the acid in lumps of various sizes, was changed into an opaque, white, friable substance, resembling tubercle—as, indeed, were the membranes, after a few hours' immersion either in the weak acid or in water.

Exp. 12.—Ten drops of pus, weighing 8 grains, and ten drops of water, weighing 6 grains, were well mingled together, and then three drops of liquor potassæ, weighing $2\frac{1}{2}$ grains, added. The plastic mucus resulting weighed $16\frac{1}{2}$ grains; it was readily suspended on the point of a needle. On immersing it in strong acetic acid, it became opaque, white, and tubercle-like; in a few minutes it was taken from the acid, washed in water, and rolled upon blotting-paper until it ceased to wet the paper. It now weighed 8 grains, the weight of the pus used. But moisture still continued slowly oozing from it, like serum from a clot of blood, and at the end of half an hour it weighed only 6 grains, at the end of an hour 5 grains, and at the expiration of four hours it weighed 4 grains, and could be handled without sticking to the fingers. It had all the microscopical characters of a tubercle.

Exp. 13.—Opaque and cream-like pus, a very short time after withdrawal, was mingled with equal and double quantities of blood-serum, and then treated with small proportions of liquor potassæ. The same kind of plastic material, or transparent mucus, resulted as when water was used, and the same kinds of membrane and opaque tubercle-like matter were produced by the action of the acid.

Exp. 14.—Ten drops of pus weighing eight grains were mingled with ten drops of blood-serum weighing eight and a half grains, and then the mixture was treated with three drops of liquor potassæ weighing two grains. The transparent plastic material resulting was suspended on the point of a needle. It was placed in strong acetic acid, and

* Vide 2d Series of Researches, Sect. III.

secretions appear to me to be colourless blood-cells in some or other of their stages of transformation, and beyond the colourless cell of the blood, which has active molecules within it, I believe no cell to be formed otherwise than perhaps by the passing of two cells into one, or the division of one cell into two, an event which may occur during their structural transformations. I certainly have never seen the slightest disposition to the formation of cells, in any blood-plasma, lymph, blastema, exudation, organizable fluid, effusion, or liquor sanguinis, that I have examined. On the other hand I have repeatedly seen blood-cells, pus-cells, mucus-cells, and cells in lymph, rupture, discharge myriads of active molecules, and thus form a mucous or fibrous tissue, leaving their integument in the form of an altered cell upon the field of the microscope.*

The question what are the stages or the forms of matter between the food and the blood-cells, is not now the subject of discussion. If we take the colourless-cell circulating in the blood as the point of departure, then two distinct lines of investigation lie open before us; the one, leading from this cell back to the food; the other, conducting us from it to the secretions. The former must include the law of nutrition from the food to the blood-cells; the latter the law of nutrition from the blood-cells to the secretions.

It is to the last of these laws, or rather to the latter portion of the general law of nutrition, that my researches have been chiefly directed, and this portion it appears to me may be thus shortly expressed.

Colourless-cells, isolated, free, and in motion in a fluid, become stationary and linked together by a plastic element and fibres; these grow, reach a free surface, discharge their contents, and are eliminated.

In the preceding synoptical table I have attempted to embody my theory of nutrition, and to exhibit the relation between the healthy transformable blood-cells and tissue and mucus; and between the unhealthy untransformable or degraded pus-cells and tubercles.

Your obedient servant,

WILLIAM ADDISON.

Great Malvern, October 9, 1814.

OBSERVATIONS ON SYPHILIS;

TREATMENT OF THE PRIMARY SORE.

By THOMAS BARTLETT, Esq.

Assistant Surgeon, 41th Reg.

(For the London Medical Gazette.)

PRIOR to the publication of John Hunter's treatise, there does not appear to have been any correct idea of the laws which regulate the Venereal Disease, and in consequence, no just views of its treatment. Thus, all modern knowledge of this disease has for its basis, the facts which Hunter collected, and his reasoning upon them. But, if the older writers did not sufficiently generalize, doubtless owing to their minds shrinking from so great a task as the attempt to bring under the action of one general law the discordant materials—as much fallacy as truth—which then constituted the knowledge of this disease; it must, on the other hand, be admitted that Hunter erred in the opposite extreme. And the first wrong direction which his powerful mind took in the consideration of this subject, appears to have been his having believed it almost impossible for the first chancre of a contagion to be cured without its affecting the constitution. This opinion we gather from the following passage in the 7th Section, Chapter 3d of the 5th Part. "In every case of a chancre, let it be ever so slight, mercury should be given internally; even in those cases where they were destroyed on their first appearance. It should in all cases be given the whole time of the cure, and continued for some time after the chancres are healed; for as there are perhaps few chancres without absorption of the matter, it becomes absolutely necessary to give mercury to act internally, in order to hinder the venereal disposition from forming." It is the more worthy of remark, his not having had any doubt of the soundness of this doctrine, as we find this sentence in the same section. "In the cure of chancres I have sometimes seen, when the original chancre has been doing well, and probably nearly cured, that new ones have broken out upon the prepuce, near to the first, and have put on all the appearance of a chancre, but such I have always treated as not venereal." There can scarcely be any difference of

* Vide Provincial Med. and Surg. Journal, June 5, 1811.

opinion now as to the new chancres having had not only the appearance but every other property of the original.

As Hunter allows that mercury does not prevent the origin of fresh venereal infection, it appears strange that he did not see the possibility of his new chancres being venereal. His words are, "Mercury, prior to the action, will not remove the disposition, and of course will not hinder the action coming on afterwards." We can scarcely doubt that in his extended practice some of these new chancres were not healed until after the effects of the mercury in the system had gone off, as Hunter must always have given mercury at the very commencement of the primary sore, as he believed that absorption takes place early in the disease, and as in many cases the mercury must have delayed the cure. From this we may learn that no powers of mind can obviate the necessity of each circumstance that goes to make up a link in the chain of thought in the inductive philosophy, being thoroughly substantiated, before it is admitted as a fact. By how many years has our knowledge of the venereal disease been retarded by this unfortunate oversight of John Hunter? And how many miserable people would have saved their noses and their palates which have been lost to them by the general belief in the truth of his theory?

Is not the infrequency of secondary symptoms when the primary sore is quickly healed owing to absorption not taking place at its early stages? Is it not, therefore, requisite that a primary sore should have existed some time before the lues venerea of John Hunter can arise, unless where there is some great peculiarity of constitution? And does it not follow that the greater prevalence of the secondary symptoms when mercury has been given for the cure of the primary sore, and immediately on its appearance, is owing to its exhibition before absorption has taken place, and while the disease is purely local? So that the venereal virus is absorbed into the constitution, when all danger of such a contingency is forgotten, owing to a premature salivation. Assuming, then, the prudence of giving mercury for local venereal affections, would it not be more judicious to delay its exhibition until the primary sores have healed, as we may be certain that no absorption can

then take place, by which treatment it would be impossible for the secondary symptoms to arise; unless, indeed, the healing of the primary sores had been neglected?

Since Hunter's time, the army surgeons, under the guidance and direction of Sir James McGrigor, the Director General, have not been slow to turn to account, in the investigation of this disease, the great field of knowledge which their profession afforded them. And, as their views did not coincide with those generally entertained, it was fortunate that the result of their experience was given to the world under the sanction of the head of their department, as his name could not fail to carry such weight with it in matter of science as to cause a doubt in the minds of all as to the correctness of their opinions. But even with this advantage, the treatment of syphilis adopted in the army has not become so general as might have been anticipated, owing in a great measure to the respect entertained for all the axioms of John Hunter, and also, in no small degree, to the circumstance of civil practitioners not being able to trace the medical history of the patients after the immediate treatment is concluded. From this it follows that surgeons in civil life cannot fully appreciate the accuracy of Army Medical Reports resulting from the admirable system of placing on record, at the period of its occurrence, every fact in the medical history of each soldier, which has been brought to perfection by Sir James McGrigor. With reference to the practical point, it may suffice to mention, that as the chief indication in the Hunterian treatment of primary syphilitic sores is to secure the system against the effects of the absorption of the venereal virus, so the army treatment of these sores, in the present day, is to skin them over as quickly as possible, without mercurialising the system.

In the non-mercurial treatment of chancres, it is highly important to ascertain the readiest means of healing them, as the chances of absorption are increased in an exact ratio to their duration. On a careful consideration of this point, it occurred to me that as blackwash was a good application, its active ingredient would probably cause them to heal quickly; and having the good fortune at this time to have a large field of observation, owing to my

being in medical charge of the 51st Light Infantry, in consequence of the absence on leave of Surgeon Miller, I put it into practice, and have never departed from it since. The manner in which I used it was the following. I applied a dry stick of lunar caustic lightly over the whole surface of the chancre, and then dry lint; on the falling off of the slough, which sometimes takes place in 24 hours, but more generally in 48, dry calomel was carefully sprinkled over every part of the sore previously well washed; after which a strip of lint sufficiently long to surround the penis was applied after it had been wetted with cold water. The further treatment consisted in applying calomel and wet lint once a day in this way, after the sore had been thoroughly cleansed from all the discharge by luke-warm water. When there is a short prepuce, strips of sticking plaister are required to approximate its extremities to prevent the lint falling off. Whenever the chancre affects any portion of the frænum, division by the knife is necessary to prevent the cure being retarded. No constitutional treatment is necessary. Some cases treated in this way are mentioned in the *Lancet* of the 30th June, 1838, by Mr. Burton, of the African Corps. The medical registers of the 51st Regiment, which were forwarded to Fort Pitt in obedience to the orders of the Director-General on the embarkation of the regiment for colonial service, contain, as far as my knowledge goes, the first recorded cases of this treatment of chancre. When the chancres have been of short duration, and have not the characteristics of the true Hunterian, the application of caustic is not needed, whereby the cure is accelerated, the time being saved of the destruction and the healing up of that portion of substance which the lunar caustic affects. Is it because the venereal virus has not penetrated beyond the external surface of the sore, that it is cured at the commencement without destroying vitality? I have now adopted this plan of treatment in such a considerable number of cases, that I have no hesitation in recommending it to the attention of the profession as the quickest method of healing chancres.

Of the many cases which I have treated in this way, all healed with great rapidity, with the exception of

two. One was the case of a private soldier, in whom sloughing of the cellular membrane of the prepuce came on, when this treatment was discontinued, and warm fomentations and poultices substituted for a time, after which the former method was adopted, and the sore healed kindly, the cure having been delayed about a week. This man was of a weakly habit, and had a very sickly appearance—he was only temporarily under my care. The second case was that of an officer who had neglected to follow the directions given to him, and had reported to me the chancre as cured, while a sinus was running down his penis, which continued for some time, until accidentally discovered, when the treatment was begun *de novo*; greater attention was enforced, and the sore healed quickly, considering its depth, but not before secondary symptoms had come on in the shape of squamous eruptions, pains in shins, and ulcers in the tonsils, which disappeared on affecting the gums with mercury; a gentle salivation being kept up so long as any eruption remained, and the application of sulphate of copper to the throat. This is remarkable, as the only case of secondary symptoms which I have had in my practice since I have adopted this method of cure, when the patient had not had other treatment previously. In this case my patient was not quartered in the same barrack with me, and the regiment received the route during the treatment, which prevented me paying the requisite attention for some time.

Nothing, perhaps, can more clearly show the great improvement which has taken place in the treatment of syphilis since John Hunter's time, than his stating* that it is easier to cure a gonorrhœa than a chancre. This may teach us that with a careful observation of the animal economy, it is possible to set bounds to the advances which may be made in the treatment of disease. But no ground can be gained unless men think for themselves, for servilely to copy the letter of the directions of a great authority, and thereby to close up our observation of what nature unfolds to us, is not a mere submission of our judgment to the possessor of great faculties, but an absolute surrender of our reason. And medicine, least of all

* Section 3d, Chap. 1st, Part 2d, of Treatise on the Venereal Disease.

the sciences, can afford its students an indolent imitation of however great a master, as it is purely a science of observation, increasing its utility by the diligence with which its followers observe the operations of nature, and study their phenomena.

ON THE FUNCTIONS OF THE BILE*.

BY GEORGE KEMP, M.D. Cantab.

Fellow of the Cambridge Philosophical Society.

(*For the Medical Gazette.*)

THE almost universal presence of the bile, or a fluid analogous to the bile, throughout the animal kingdom, and the serious disturbance occasioned by its suppression or abnormal secretion, evidently point it out as a subject meriting the most minute and diligent research. Nor can we overlook the circumstance, that a large portion of the information which we at present possess with reference to its nature and uses, must be considered rather as ingenious speculation than as facts elicited by actual experiment.

That the fluid is not merely, or even to a great extent, excrementitious, that it is not merely an exuvial portion of the blood, is sufficiently proved by the experiments of Berzelius, from which it appears that human faeces contain much too small a quantity of a substance resembling the bile to warrant the idea that it is thus evacuated. The subsequent experiments of Will may also be adduced as confirming this statement, as neither horse nor cow-dung afforded more than $\frac{1}{20}$ th part of a substance soluble in alcohol; and even that small portion, according to Professor Liebig, bears no resemblance, either physically or chemically, to the biliary secretion.

Taking the more probable view, viz. that this fluid is recrementitious, that it is destined either to effect certain chemical or mechanical changes in the contents of the duodenum; thus, according to the opinion of Tiedemann and Gmelin, placing the chyme in a condition more favourable to absorption, and being, at the same time, itself absorbed; still, from the nature of the chyle, as found in the thoracic duct,

the problem remains to be solved, in what state the bile, or the elements of the bile, again enter the system. That the organic elements of the bile, if reabsorbed by the lacteals, assume a different molecular arrangement than they possess in the gall-bladder is evident from the total absence, in the lacteal vessels and thoracic duct, of the characteristic bitter taste of the bile; a physical character so striking that a single grain of dried ox-bile diffused through a pint of water is readily distinguished.

In the following remarks it is assumed, that the chyle bears a certain relation to the food, and that a comparison of the composition of the ingesta with that of the chyle will point out in a general manner the nature of the changes effected by the process of digestion. It is further assumed, that any changes which admit of explanation by supposing them to result from the operation of common and well-established actions, may be legitimately referred to such as their most probable cause: thus, if one body differs from another body in containing one or more equivalents of oxygen, and the former body has been exposed to oxydising agents, it appears in the highest degree probable that oxydation has actually been effected by those agents. Again, if one body differs from another in the quantity of the elements of water which it contains, it is presumed that the one is convertible into the other under favourable conditions.

With reference, then, to the composition of the food, it has now been sufficiently established that in gramivorous and carnivorous animals it essentially comprises two portions, the one adapted to the formation of the nitrogenised, the other for the formation of the non-nitrogenised portions of the animal frame. Albumen and starch may in fact be taken as the types of each respectively.

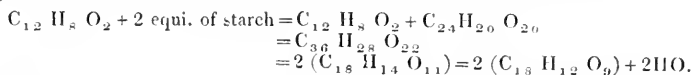
With reference to the composition of the chyle, it was found, by the researches of Marcet and Macaire, to consist of a body which may be expressed by the empirical formula $C_{5.8}H_{13}N_5O_{21}$; and this must, therefore, represent the sum of the albumen and starch, having undergone the changes necessary for assimilation. Modern researches have proved that the albu-

* Read before the Medical Section of the British Association, Sept. 30th, 1844.

men undergoes but a very slight change in order to render it fit for absorption. Deducting, therefore, the formula of proteine or albumen (for in a certain sense they may be considered identical) from the formula for chyle, the remainder will represent the body into which the non-nitrogenised portion of the food has been changed by digestion; thus— $(C_{58} H_{38} N_5 O_{21}) - (C_{10} H_{31} N_5 O_{12}) = C_{48} H_{7} O_9$.

But the formula for starch is $C_{12} H_{16} O_{10}$; how then may this difference, which has evidently taken place during digestion, be accounted for?

In offering a solution to this question, I would beg it to be distinctly understood that my object is at present merely to direct attention to the remarkable fact, that by the mere action of oxygen on the elements of the bile

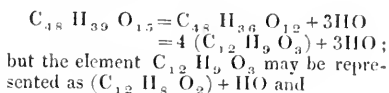


The difficulty of instituting a series of experiments sufficiently simple in their condition deprives us of the advantage of a synthetical proof, and at present the subject must remain as an hypothesis, though a very probable one. I hope, however, at the next meeting of the Association, to be able to prove from observation the exact period of digestion at which the bile changes its character. This will obviously be accomplished with ease by passing a ligature over the pylorus of an animal killed during the digestive process, another beyond the ductus communis choledochus, and so on, at short intervals, throughout the length of the duodenum, and by examining the contents of the several segments the point will be ascertained at which the fluid loses its normal characters.

I beg leave, in conclusion, to make a remark on the cause of alkalinity in the bile. From certainly not less than 200 samples of bile of different animals, which I have examined, this fluid has been uniformly neutral when in a healthy state and fresh; a very short time, however, is sufficient to change its character when the mucus of the gall-bladder is present. It will be remembered that this latter body has been proved to be a proteine-compound, all of which undergo decomposition with facility, carbonate of ammonia being at the same time formed; and,

and starch, the result is a body represented by the formula $C_{18} H_{12} O_9$, which is the non-nitrogenised portion of the chyle; and it is highly probable that the action of the pepsin is catalytic, effecting the interchange and combination of the elements of the two former bodies.

Thus the organic portion of ox-bile may be represented by the formula $C_{48} H_{42} NO_{13}$, and by the action of nitric acid on this body we deprive it of the elements of ammonia and obtain $C_{48} H_{39} O_{15}$, which for the convenience of subsequent comparison we shall put into a different form.



in preparing the bile for analysis, great care should be taken to remove the whole of the mucus before evaporation is commenced. The cases in which I have observed it alkaline in the human body were obtained from patients suffering from extreme prostration of the nervous system, particularly those who had died from typhus fever and severe burns.

Some precaution is necessary in testing with turmeric paper, in consequence of the intense colour of the bile; the paper should be carefully washed when removed from the fluid, and even then a line of demarcation will generally be found between the dry and moistened portion; if, however, the mass of the moistened portion retain its yellow colour after being washed, the dark line is manifestly attributed to capillary action.

SUPPLEMENTARY REMARKS.—In addition to the above statement, it will not be considered irrelevant to make a few brief observations relative to the change which the bile undergoes subsequently to its introduction into the gall-bladder, and also to the neutral condition of the fluid when in its normal state.

It is now established by direct experiment* that the hepatic bile

* See my paper in the LONDON MEDICAL GAZETTE, dated Cambridge, May 1st, 1843.

possesses characters, both physical and chemical, differing widely from those of the cystic bile; it is therefore evident that this change is effected by some agent contained in the gall-bladder, and the only bodies to which we can refer this agency is the muens of the gall-bladder or the epithelium of that organ; it is, however, a remarkable fact, that although we should imagine *a priori* that on this account the contents of the gall-bladder would be always various in composition, ultimate analyses, conducted on a very extensive scale, afford results so nearly uniform, as to leave no doubt that the conversion of the hepatic into cystic bile occurs immediately on its introduction to the gall-bladder, or that these fluids are almost identical in their elementary composition, although differing remarkably in their physical characters as well as in their chemical relations to other bodies.

Again, the bile in a healthy and perfectly fresh state is neutral; if, however, when emptied with the muens out of the gall-bladder, it be left in contact with that substance, a very short time is sufficient to bring about an alkaline reaction; and this effect is greatly accelerated by a moderate temperature. Now in the living animal both these conditions are present, and yet, in the case of animals slaughtered after long-continued fasting, where there is invariably a large accumulation of bile, and when the fluid has for many hours been exposed to the joint influence of heat and the mucus, it still retains its normally neutral state in the gall-bladder, then some force must be in operation, counteracting the tendency to molecular change which so speedily manifests itself out of the body. This is an interesting and may be a very important subject of research.

ON SCIENCE AND PRACTICE.

To the Editor of the Medical Gazette.

SIR,

THE position which I advanced in my last communication, viz., that all disease is intermediate between health and death, and the obvious and direct inference which follows upon the reception of this truth, that those who are ill require to be *raised up to health*, instead of being lowered and antiphlo-

gisticated as they are at present, is one of no trifling importance; because it exhibits in a very clear and striking point of view that the endeavour to cure inflammatory diseases by antiphlogistic means consists of efforts which are not exerted in the right direction. If, therefore, this truth be established, and if at the same time it lead to other more speedy and efficacious means of cure, it will work a great revolution in the modern practice of medicine. In saying that persons who are ill require to be raised up to the standard of health without any preliminary lowering, of course I shall be met by a reference to the multitudes of cases recorded as having been treated antiphlogistically with a happy issue. I have no wish whatever to deny these facts, but I do say there is nothing in the circumstance of persons having recovered under such treatment to show that they might not have recovered more speedily under a very different plan: and when it is considered how many die, notwithstanding the most scrupulous employment of the antiphlogistic treatment in all its rigour, and how many of those who do not die are several years in regaining their health, while many, particularly those who are no longer young, only drag on a miserable existence for a few years, and never recover at all, I think the most prejudiced must admit that some improvement is highly desirable. The first instance belonging to this latter class of severe cases where the mischievous tendency of the antiphlogistic treatment is most apparent, which arrested my attention, occurred as much as seventeen or eighteen years ago: it was a case of inflammation of the iris (right eye), the patient a well-grown young man, æt. 19: he was bled, mercurialised, purged, and starved, *secundum artem*. Under this treatment the eye became clear, and remained well for several weeks; occasionally, however, somewhat dull and red towards night. At the end of this time the iris became again inflamed; the same treatment was repeated, and again the eye became clear and the sight good. To be brief, relapse after relapse occurred, the interval of ease between each becoming successively less and less, until at length there was no remission at all. While this was going on, he had been brought to London;

the first authority in such cases was consulted, and he was condemned to a continuation of the same treatment, with the addition of blisters, setons, and issues. More than two years were passed in this manner, and by that time he was reduced as low as it was possible to be—lying in bed, too weak to stand, with fits of convulsions constantly recurring, each of which was expected to be the last, and the eye still inflamed. These convulsions had nothing of the character of epilepsy about them; they consisted in loose and irregular contractions of the voluntary muscles, just such as may be seen at any time in animals which are dying from excessive loss of blood. By dint of great attention, however, he recovered a little, and then the gentleman under whose immediate care he was, seeing how unavailing all previous treatment had been, cautiously commenced an opposite plan, as it could be borne. Under this plan the patient eventually recovered completely, with the exception of the iris being somewhat discoloured, though he did not entirely throw off the effects of what he had gone through until within the last three years. This was the first case of the kind which occurred within my observation, and the latter part of it especially, in which I saw a most obstinate inflammation getting well under a plan of treatment which I had always been taught to believe would be most pernicious, made an impression on my mind which will probably never be effaced. It was a "great fact" which I could neither deny nor understand; it intruded itself into my thoughts day and night, nor did it suffer me to rest until a thorough investigation into the whole subject of inflammation, the result of which appeared in the pages of the *GAZETTE* some ten years ago, revealed the explanation of it. It is remarkable, that although those papers contain the only complete review which has ever been taken of the whole subject of inflammation, for the purpose of showing how modern doctrines are affected by the facts which have been discovered since the death of Mr. Hunter, no one, not even he whose *periscope* eye professes to take cognizance of the "spirit of the periodicals," should have taken any notice of them. It may be, perhaps,

because I have drawn no such picture as that of inflammation sitting like a hen in a part during hatching, the "period of incubation," constituting a picture of such as has elsewhere been presented to us. How much more easy and pleasant it is to allow free play to the imagination, and to speculate upon the attractions and repulsions of molecules and globules, than to be bound and fettered by stubborn facts. In the present state of physio-pathological science it is scarcely possible for practitioners to believe that such cases as the one I have just mentioned, which are now protracted through four, five, or more years, ought to get well in less than as many months, or that any of the harassing circumstances connected with them can be at all owing to the antiphlogistic treatment; a sufficient cause for every relapse is speedily found either in some supposed error in diet, taking fresh cold, in the unusual severity of the disease, in peculiarity of constitution—in any cause, in short, but the true one: the science is never mistrusted; it is never dreamed that the active treatment has had art or part in producing such results. If there be any doubt at all, it is rather whether the bleedings were sufficiently copious in the first instance, so that a surgeon is more likely to blame himself for not having bled enough, than to entertain the least suspicion of having bled too much. A very large proportion of the medical profession consists of individuals who pique themselves on their experience, gained in many long years of practice, and their universal cry is, "give us practical facts; tell us the particular quantities and combinations of medicines, and the occasions which require them:" these gentlemen would rather trust to their memories to supply them with a particular remedy for each particular emergency that may arise, than give their minds to the comprehension of a general principle. Now the value of these practical facts depends entirely on the power of the practitioner to apply the remedies at the moment they occur; hence the great demand for practical works, and the importance which has of late years been attached to accurate diagnosis, in order to be as sure as possible of always employing the remedy under precisely

similar circumstances. Each man, therefore, collects his stock, and prides himself as being superior to his neighbours in proportion as he flatters himself that his tact enables him to employ it at the proper moment. The worst part of these practical facts is, that they are very apt to fail precisely at the time when success is most important; from that moment all confidence is withdrawn from them, and they are regarded simply as things there may be "no harm in trying." It is this state of things which causes the practice of medicine to border closely upon empiricism, and enables the quack, when reproached by the physician, to return the "in quoque" with some show of justice. The one thing needful, to place the practice of medicine in its proper position, is the correction of the science by which it is directed: the effect of this will be to simplify practice and to impart confidence, because if we can understand why a remedy succeeds in one instance, and why it fails in another, we shall be able to establish general principles on sound foundations, and be able, also, to vary and modify it so as to ensure its success in a much wider range of cases than before, even though the circumstances may not be precisely the same in each.

I think the most convenient course to be pursued, in carrying out the endeavour to place the science and the practice of medicine more in unison with each other than they are at present, will be to show what function maintains health, how it may be injured, and how it may be restored. It must be borne in mind that what maintains health and what constitutes health are two very different questions, and may be taken separately. I propose to confine myself to the former; but as this letter has already extended to a considerable length, I shall defer entering upon it until my next communication.—I have the honour to be, sir,

Your obedient servant,

J. W. EARLE.

Cheltenham, Oct. 1844.

P.S. If your correspondent "Gyensis" will take the trouble to read my last letter again, till he is quite sure he understands its meaning, I shall be happy to attend to any observations which he may then be pleased to offer.

ON THE

PATHOLOGY AND TREATMENT OF OVARIAN DISEASES;

WITH CASES.

By DR. SAMUEL J. JEAFFRESON,

Physician to the Chelsea, Brompton, and Belgrave
Dispensary, &c.

[[Continued from p. 46.]

(*For the London Medical Gazette.*)

I SHALL now take the liberty of drawing the reader's attention to the following statistical table of the results of 74 operations for the extraction of ovarian tumors. The materials from which this table has been drawn up have been chiefly derived from the Medical Gazette, Lancet, and Medical Times; they have been also compared with Dr. Churchill's table in the Dublin Medical Journal, from which source three or four cases previously omitted by myself have been copied; and for an account of the three operations by Mr. Lane I am indebted to that gentleman himself, whose readiness to afford me every assistance and information, and desire to promote a strict scrutiny into the result of these operations, did equal credit to the kindness of his heart and the soundness of his judgment.

The table has been divided into three great classes.

1st. Of the cases in which the ovarian tumor has been removed by the large abdominal incision, the hand being introduced within the peritoneal cavity for the purpose of separating adhesions, passing ligatures on the pedicle, &c.

2dly. Of the cases in which a small incision has been made, through which the cyst has been drawn (first emptied of its contents, and tied externally); and,

3dly. Of the cases in which the removal of the tumor has been attempted, but abandoned on account of adhesions, or in which the tumor has been found to be other than ovarian, or in which no tumor has been found at all.

STATISTICAL TABLE
OF THE
RESULTS OF SEVENTY-FOUR OPERATIONS FOR THE EXTRACTION OF OVARIAN TUMORS.

CLASS I.—*Tumors removed by long incision; the hand introduced into the peritoneal cavity.*

No.	Age, &c.	Date.	Name of Operator.	Nature of Incision.	Character of Tumor.	Result.	Remarks.
1	Mrs. Crawford	1817	L'Ammonier	4 inches	Common abscess of ovary?	Successful	Tumor divided previously to removal
2	A Negress		Dr. M'Dowall	9 inches	15 pints fluid; sac $7\frac{1}{2}$ lbs.	Successful	Tumor divided before removal; division followed by severe hemorrhage. It adhered firmly to fundus uteri and bladder
3			Dr. M'Dowall	9 inches	Not described	Successful	
4	Ditto		Dr. M'Dowall	9 inches	"Scirrhus ovarium," 6 lbs.	Successful	
5			Dr. M'Dowall	Long	Not stated	Successful	
6	33	1821	Dr. N. Smith	3 inches	Monolocular?	Successful	I cannot discover that these operations were conducted on the principle first introduced by Mr. Jeaffreson, and therefore presume the hand was introduced within the abdominal cavity
7	30		Dr. A. Smith	3 inches	Monolocular?	Successful	
8			Dr. Quittenbaum	4 inches	Not stated	Successful	Two gallons of ascitic fluid first drawn off by trocar. Had been tapped seven times for the ascites. Firm adhesions round umbilicus for 3 or 4 inches
9	20	14 Sept. 1829	Dr. Rogers, New York	Moderate	Mixed; solid part $3\frac{1}{2}$ lbs., whole about 12 lbs.	Successful	The ovary of the opposite side was found diseased, but too adherent to pelvic viscera to be removed; it was about a quarter the size of the one removed.—She afterwards lived servant with Dr. Blundell
10	36—single		Mr. Lizars	From ensiform cartilage to symphysispubis	Not described; ascites	Successful	Firm adhesions to brim of pelvis, colon, and abdominal walls, partly overcome by dissection, and partly by tension and the handle of the scalpel
11	25—single		Mr. Lizars	Long	7 lbs.	Died 56 hours after operation of gangrene of peritoncum	

12	38—married; family 38	June 1820	Dr. Chrysmer	Long	8 lbs.	Successful	Became pregnant 16 months after operation
13		1820	Dr. Chrysmer	Long	6½ lbs.; mixed.	Died 36 hours after operation	Considerable adhesions; ascites; disease complicated by humped back, deformed pelvis, tuberculated liver, and diseased mesenteric glands
14			Dr. Chrysmer	Long	7½ lbs.; mixed; almost bony hard in parts	Died 30 to 36 hours after operation	Ascites; considerable adhesions; died of peritoneal inflammation
15	31		Dr. Ritten	Long	Fluid; monocular	Successful	Dr. Granville attributes the fatal termination to copious venesection practised by the medical superintendent under the false alarm of peritonitis supervening
16	30 to 40	21 March 1827	Dr. Granville	9 inches	8 lbs.	Died 3 days after operation	Adhesions slight; ascites
17			Dr. Dohlhoff	Long	Mixed	Died	Extensive ascites; numerous and troublesome adhesions. Had been frequently tapped previously for ascites
18	46	Sept. 1842	Dr. Clay	Long	Mixed; multilocular, and chiefly fluid; 17 lbs. 5 oz.	Successful	Considerable adhesions and plentiful ascites
19	57	Sept. 1842	Dr. Clay	Long	Mixed; 9 lbs.	Successful	Attachments of tumor spongy, vascular, and so broad that the ligature could with difficulty be applied so as to prevent hæmorrhage. She died in a state of syncope. She had been previously subject to fainting fits
20	39	Nov. 1842	Dr. Clay	Long	Mixed?	Successful	
21	45		Dr. Clay	Long	Very solid; 13 lbs.	Died 1½ hour after operation	
22	22		Dr. Clay	Long	Mixed	Successful	
23	40		Dr. Clay	Long	Mixed	Died	
24	32	1843	Dr. Clay	Long	Mixed; 29 lbs. 14 oz.; about 14 lbs. solid, 16 lbs. fluid	Successful	
25	59		Dr. Clay	Long	Mixed	Died	
26	46		Dr. Clay	Long	Mixed tumor	Successful	
27			Dr. Stilling	6 inches	Not described	Died	
28			Mr. Morris	Long	Not described	Successful	

29	58	6 Nov. 1842	Mr. Wahe	13 inches	Chiefly fluid, in two or more cysts; solid part, size of double fist, very hard	Successful	No adhesions
30	57	30 May, 1843	Mr. Wahe	12 inches	Chiefly fluid; 17 lbs.	Successful	No adhesions; some hæmorrhage from the divided pedicle, "proving the advantage of the long incision to remove blood-clots, &c." Patient narrowly escaped, and laboured under phlegmasia dolens after operation
31	19 to 20	12 Sept.	Mr. Wahe	14 inches	A single fluid cyst principally; a moderate portion of solid matter, very vascular; weight 28 lbs.	Successful	No adhesions
32	55	19 Oct. 1843	Mr. Wahe	15 inches	14 lbs.; 5 lbs. solid, rest fluid, and some cheesy	Died	Ascites. A large fibrous tumor of uterus complicated the disease; this was not diagnosed during life. The resting of this tumor on the abdominal incision appears to have been the cause of death, by preventing it healing, and giving rise to low inflammation with suppuration, &c.—It is fair to state that the operation was undertaken only at the urgent desire of the patient, and contrary to the judgment of Mr. Wahe and Dr. Blundell
33	35	26 June, 1843	Dr. F. Bird	3½ to 4 inches	20 lbs.; chiefly fluid, a solid portion size of an orange	Successful	Two slight adhesions. Tumor emptied of its contents before removal. Disease of 17 years' duration; had been tapped ten times
34	35	28 Jan. 1844	Dr. F. Bird	Small at first, afterwards extended	Multilocular; 35 lbs.	Successful	Tumor divided previously to removal. Some adhesions anteriorly, which readily gave way
35	21	Nov. 1843	Dr. F. Bird	4½ inches	Chiefly fluid and monolocular; 27 lbs.	Successful	No adhesions. Cyst evacuated before its removal
36	21	1 April, 1844	Dr. F. Bird	4 inches	Fluid; monolocular; 29 lbs.	Successful	

37	32		Mr. B. Cooper	Long	Chiefly solid, with some fluid cysts; 32 lbs.	Died 7th day after operation	Death from peritonitis. Malignant tubercle was also discovered in fundus of uterus; some few adhesions about seat of former trocar wounds
38	29	3 Sept.	Mr. Greenhow, Newcastle	Long	Chiefly solid, with some fluid cysts; 32 lbs.	Died 7th day after operation	Adhesions with omentum separated by bistoury. Peritonitis; some points of inflammation and ulceration about the pyloric orifice of stomach
39	37	20 Oct. 1843	Mr. Southam	9 inches	Solid matter, with several cysts; 4 lbs. 12 oz.	Successful	Ascsites 14 lbs.; no adhesions
40	47		Dr. Hopfer	Long	7½ lbs.; parts very hard, parts containing fetid pus	Died 30 hours after operation	Adhesions.
41	38		Dr. Hopfer	Long	Not described	Successful	Great stress laid upon the value of opium in the symptoms following the operation
42		23 June, 1843	J. L. Atlee, M.D.	9 to 11 inches	Both ovaries—one size of goose's egg, other not stated; "containing hydatids"	Successful	Ascsites to about 39 lbs.; one tumor firmly adherent in pelvis
43	28	1843	Mr. Lane	From umbilicus to pubes	Simple cyst, very thick; 14 pints	Successful	No adhesions. Phlegmasia dolens followed operation. Mr. Lane performed paracentesis ten days previously to the operation, but found great inconvenience from this proceeding; the lower part of the collapsed and emptied cyst had got so completely jammed into the pelvis as to be with difficulty removed, and to give the semblance of strong and general adhesions; this, however, was due in part to atmospheric pressure, and they were readily removed when air was admitted by getting the fingers under the folds of the cyst
44	38	1844	Mr. Lane	From umbilicus to pubes	Fluid; multilocular	Successful	The cyst was sessile on, and firmly attached to, the fundus and neck of uterus. Having emptied the larger cysts, the ligatures were applied round a portion of the collapsed cyst

45	45	1843	Mr. Lane	From umbilicus to pubes	Two tumors, size of the closed fist, and $3\frac{1}{2}$ gallons of fluid	Successful	Extensive adhesions from one hypochondriac region to the other, of a hand's breadth. Their separation illustrated the advantage of Mr. Lane's mode of incision, for the hand forced gently between the abdominal walls and the cyst separated the adhesions. Cyst emptied before removal. The last paracentesis was followed by entire refilling of cyst in five weeks
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CLASS II.—*Small opening, cyst drawn through the opening and tied without introducing the hand into the peritoneal cavity.*

46	37	March 1836	Mr. Jeaffreson	2 inches	Unilocular; fluid	Successful	After treatment, opium and digitalis chiefly The incision was increased to 3 inches, to allow of the escape of a small solid tumor attached to walls of cyst
47		July 1836	Mr. King	3 inches	Unilocular; fluid	Successful	
48	35	Nov. 1837	Mr. West	2 inches	Unilocular; fluid	Successful	Death by enteritis. Other ovary was found to be diseased
49			Mr. Crisp	—	Unilocular; fluid; 3 gall.	Successful	
50			Mr. West	—	Unilocular; fluid; 24 pints	Successful	
51	Miss S., 23 A. D., 21	9 Sept. 1840	Mr. B. Phillips	—	Unilocular; cyst thick; 330 oz. of fluid	Died 5th day after operation	

CLASS III.—*In which the tumors could not be removed from adhesions, proved to be other than ovarian tumors, or in which no tumor was found, &c.*

52	54	31 July 1843	Mr. Waine	5 inches	Chiefly fluid and unilocular	Recovery in statu quo	Removal abandoned on account of adhesions
53	34—single	1826	Dr. Granville	9½ inches	—	Recovery in statu quo	Removal abandoned on account of adhesions
54			Mr. Lizars	Long	Size of full period of utero-gestation, or larger	Recovery in statu quo	Removal of tumor abandoned on account of adhesions. Two punctures and incision into mass followed by some blood only

55	Dr. Dieffenbach	Moderate	—	Recovery in statu quo	Removal abandoned on account of adhesions. Puncture of tumor followed by hemorrhage to a very serious extent
56	Dr. Martini	9 inches	—	Died 36 hours after operation	Removal abandoned on account of adhesions. "1½ pint of serum" followed a puncture; part of the cyst was removed.
57	Widow, 27	5 inches	Size of seventh month of pregnancy	Recovery	Adhesions to pelvis and pelvic viscera
58	Dr. Clay	Long	Apparently solid	Died 6th day after operation	Removal abandoned on account of adhesions posteriorly. A fistulous opening was established through the wound by bringing out a portion of cyst, and kept open discharging up to the 70th day, at which she was discharged
59	Anonymous— Froiep's Notizen	Long	—	Died	Removal abandoned on account of adhesions. Tumor bled when punctured; operation followed by phlegmasia dolens
60	Dr. Dohilhoff	6 inches	—	Died	Tumor could not be removed owing to its broad base and attachments to os innominatum.
61	Mr. West	Small operation	Fluid; monocular?	Recovery in statu quo	Removal abandoned on account of adhesions
62	Mr. West	Small operation	Fluid; monocular?	Died	Removal abandoned on account of adhesions 11 gallons 8 pints of fluid withdrawn. The patient's constitution was previously much shattered
63	Mr. Hargreaves	Small operation	Mixed form?	Recovery in statu quo	Removal abandoned on account of adhesions
64	Guy's Hospital 1839	Small operation?	Two cysts	Died	Removal abandoned on account of adhesions
65	Dr. M'Dowall	Long	—	Recovery in statu quo	Removal abandoned on account of extensive adhesions to uterus and bladder
66	Dr. Dohilhoff	5 inches	No tumor!	Recovery	
67	Mr. King	Small operation	No tumor!	Recovery	

Mr. Lizars	Long	No tumor!	Recovery	The best opinions of Edinburgh confirmed Mr. L. in the existence of ovarian tumor : The operation undertaken at the urgent desire of patient. She had previously had lumbar abscess. She had been twice tapped ; but with what result is not stated
Dr. Clay	Long	Uterine tumor	Died	Complicated with ascites. The tumor, which was supposed to be ovarian, and the cause of the ascites, turned out to be a mass of intestines glued together by adhesions
Dr. Clay	Long	Hydatid tumor	Recovered	
Dr. Clay	Long	Pelvic tumor	Died	
Dr. Clay	Long	Uterine tumor	Died	
Mr. Heath	—	Uterine tumor	Recovery	
Dr. McDowall	Long	Intestinal tumor	Died	
68				
69				
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74				

Thus it would appear from the foregoing table, that the removal of ovarian tumors has been attempted in 74 cases, with the following results :—

In 37 cases the tumor was removed, and the patients recovered.

In 24 cases the operation was followed by the death of the patient : of these 24 fatal cases, the tumor was removed in 14, could not be removed on account of adhesions in 6, and was found to be other than ovarian tumor in 4 cases.

Thus, again, in 74 cases in which the operation for extraction of ovarian tumor has been undertaken, it has been completed in 51 instances, in 14 out of which 51 instances it has been followed by death, and in 37 by the successful removal of the tumor and the recovery of the patient ; whilst out of the 74 cases selected, it was found impossible to carry out the intentions of the operator in 23 ; or, in other words, the diagnosis was not sufficiently accurate to enable the surgeon to foresee the impracticability of carrying out his intentions. Of these 23 cases, 13 recovered with life, to remain *in statu quo* ; 10 died. The cause of failure was impossibility of removing the tumor on account of adhesions in 14 cases ; no tumor was found in 3 cases ; and the tumor proved to be other than ovarian in 6 instances.

[To be continued.]

ACESIUS :

A SURVEY OF THE ETHICAL BEARINGS OF
MEDICINE.

By C. F. H. MARX, M.D. &c.

(For the London Medical Gazette.)

[Continued from p. 16.]

TO JOHN NOEL HALLE,—

YOUR life presents us with a picture of all that the sensitive practitioner is called upon to endure ; you will surely, therefore, allow me to address a few words to you, and to open my heart upon the *disagreeables* in our profession.—No one can possibly understand me better.

That you had to bear the torture of stone in addition to your other sufferings, for some time before your death in the year 1822, at the age of 68, was a sore addition to an existence already sorely tried, and one which nothing

but the strength of resignation you possessed enabled you to endure with your wonted meekness.

The degree in which you proved yourself the protector, the friend, and the stay of the poor, was amply shewn in those eventful times, when so many of them paid to violence the debt due to nature. You felt in all its bitterness what he feels who throws himself with his whole soul into the service of others, and yet is misunderstood; and again, you shewed how the grandeur of innocence could force respect even from madness.—The fierce dog suddenly let loose upon his benefactor, often knows him only in the moment of attack, and instead of tearing, fawns upon him, and licks his hand. In the tempest of all the passions let loose, you preserved mental serenity both for yourself and others. To you it was permitted to visit Malesherbes in prison, and to receive his last farewell; and you, too, were the author of the petition for Lavoisier.—Could the stones of Paris speak, they would say you had lived but to wipe away tears.

Every proposition in medicine having the well-being of the community for its object, could reckon upon you as its advocate and promoter: how unwearied were you in your efforts to spread the blessings of vaccination!

For personal sacrifices and thanks received, you kept no record in the way of debtor and creditor account; had you done so, it would not have been difficult to have guessed on which side the balance must have lain.

You ever acted with sympathetic heart; you were impelled to do so by your intimate constitution, and could do no otherwise. You never expressed surprise when gratitude failed; you much rather did so when it was expressed.

Franklin relates, that having lent a sum of money to a certain individual, he requested his debtor, when he came to pay him back, that he would lend it to another in want of assistance, on the same terms, and that he, in his turn, should do the same; and so on for ever. Even so did you regard the ability to do good as a trust committed to your care—as a debt that was still to discharge.

But is it not true, when the physician is labouring even in the spirit that Fouclon taught—in the spirit, indeed,

in which MAN ought ever to be found labouring—that the burthen of his office, or rather the large infusion of selfishness he encounters, weighs oft like lead upon the heart?

The load of grief which the physician, as opposed to his profession and pretensions, carries with him from the house of death, is indeed far greater than can be imagined by those whose thoughts and converse are but of business and handicrafts.

There are physicians, it is true, who seem to make it an affair not as between themselves and the patient, but as between themselves and the disease; who have to do, not with a dying man, but with death; who proceed *secundum artem*, and content themselves with common places of morals,—but I would not remind you of these. And yet, how should the great event of death excite deep sympathy, when the cessation of suffering meets us as a blessing? And death, too, often deals with the sick man as the gardener does with the tree he would transplant, when he gradually digs round it, and cuts off its outer roots. The departure from the sphere of customary relations then takes place, so far prepared, that when at length it comes to pass, it is considered but as a natural consequence of incidents that have gone before.

But what is the state of affairs when a great calamity falls like a thunderbolt upon a house, wholly unexpected, and where the physician, it is presumed, alone can save? where life does not cease gradually and smoothly, as the leaf first fades, and then grows sere, and finally falls from the tree,—or as a clock runs down; but where nature, like the tragedian, compresses all that is most fateful and moving into one, and that the last scene? The physician comes home exhausted, and flatters himself that he will now forget the labours of the day, and gather fresh strength for to-morrow's toils in sleep; he has scarcely laid him down, when he is summoned to an infant in extremity from croup. The parents meet him as an angel sent from heaven for their deliverance; it is the first time in the course of the day that they have had a thought for a human being beyond their only child; they hang upon his looks with fear and trembling; they seek to interpret every

motion, every question, every order, into hope for their infant; the mother smiles him thanks, half in despair, because the child is quiet; the father, moved, seizes his hand. The lull is of short duration: the infant cannot any longer cough; it throws the head back, and struggles convulsively with outstretched hands for breath,—in vain; it is gone!

What now bears the physician company from the door, but the cry of despair and anguish of the crushed parents!

Should the practitioner himself, on the back of such an affair as this, happen to lose a friend,—one to whom, perchance, he had dedicated himself in thought and deed for years,—where is *he* to look for sympathy? The world treats him as though he needed none: in the blighted spot of his affections, the memory of the sharer of his cares and anxieties, far more than of his joys, alone takes root and grows. On him, exhausted in body and distressed in mind through his vain efforts to save, no one seems to waste a thought.

Another is pacing his chamber, passing in review the events of the day, and having the morrow in dim perspective before him,—he is summoned in breathless haste to a woman flooding to death perchance, in circumstances where decision and promptness may or may not avail to save; or where a perilous operation, involving the life of the mother or the child, perhaps of both the mother and the child, is imperative.

And it is not enough that, in such momentous circumstances, he must needs, like the boy at the lottery wheel, draw forth either blank or prize—like the gallows' priest, speak words of consolation into senseless ears—like the swimmer, who risks his life to save another's, and only reaches the shore with a rescued corpse;—no, he must still undergo the ordeal of perverse and incompetent criticism; and, in running the gauntlet betwixt suspicion and malice, all he has for it, is often to use his conscience, void of offence, as the soldier under the lash does a leaden bullet—bite upon it, that he may not scream for agony!

For the dead there is an euthanasia; for the sorrowing survivors visits of condolence,—who troubles himself

about the sorrow-laden physician? And yet, has not he the most frequent opportunity of knowing that in separations, tears are the true aqua regia, or assay-water of the soul, and that a syncope is the best tranquillizer of the blood?

But I hear you exclaim:—"O desine renovare dolores!" and I will even cease from complaining. I will rather yield to the hope that, in the matter of sparing the physician's feelings, improvement may yet dawn, as it has already broken upon most things else.

Whoever has read the letters of Zimmerman, which only appeared after his death, will remember how he says that in the houses of the great there is a seat indeed for the medical man, but that it is without arms or a back: and that the court and body-physician may drive a well-bred horse, but not with leathern harness*.

The word in most constant use in Japan is *PATIENCE*! Golownin's account of his travels in that country, and of his imprisonment there, contains much that is moving and interesting to the European medical practitioner.—You, Hallé, practised patience, and exercised forgiveness to such an extent upon earth, that you have surely had the palm of victory put into your hand in heaven!

ANALYSES AND NOTICES OF BOOKS.

"L'auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

The Principles of Surgery. By JAMES MILLER, F.R.S.E., Professor of Surgery in the University of Edinburgh, &c. &c. Pp. 716. Edinburgh: A. and C. Black.

We have long given up the hope of seeing the literary market supplied with those books only that are really wanted in it. Professional men in the present day are very much in the position of dealers in some perishable commodity, of which there is a glut, yet which must be got rid of before night-fall, which must be sold at any price, however low. There is such a host of them, physicians, surgeons, surgeon-

* As in Russia, at the present day, no one is allowed to wear ermine who is not of the imperial family, so, in former times, the court in France and Germany alone used leathern harness; the commonalty drove with ropes.

apothecaries, apothecaries, dentists, druggists, &c. &c. each jostling the other, and striving to attract the notice of the public—to say nothing of the shortness of an actual professional life, which scarcely commences before 30, and ends under the most favourable circumstances about 60—that no man can afford to hide the light that is within him, and wait for the practice that waiting patiently for will not always bring; no, he must make such capacity as he has to illuminate available. Like the public-spirited individuals in the metropolis, who, in foggy weather, expend part, perhaps all, of their substance in links, which they generously burn for the behoof of passengers over dangerous ground, always in expectation of receiving half-pence in return, he must proclaim himself to the world; and the sole and only legitimate means—for we differ from those who say it is not legitimate—that lie open to the professional man of doing this, are the pen and the press. Books, in truth, are seldom written nowadays because their authors have anything to communicate that is not perfectly well known to all the world; it is either because a man is a professor that he now writes a book,—and this he may do advantageously with reference to his pupils; or it is, because he conceives that he has worked out and obtained a clear and comprehensive view of the whole of a particular subject, that he takes up the pen; and, able to use his tool, it is unquestionable that he may do good service with it in this way. Finally, and we fear that this is by far the most frequent case, he feels the necessity of making his whereabouts known to the world; and as it is not yet the custom for what are called regular surgeons and physicians to advertise themselves openly as such, and to announce by the bellman that they may be consulted daily at No. so and so, in such and such a street, there is nothing for them but to fly to the ink-bottle. The false delicacy just alluded to, we may hope in time to see redressed, or got over; for we already notice people who think themselves very regular—Doctors and Presidents and Professors, F.R.S.'s and F.R.S.C.E.'s, paraded in the advertising columns of *Punch*, and the *Dispatch*, and the *Satirist*, in company with Messrs. Goss and Perry, Cockle

and Parr, and Hodgson and Abbot's "pale ale," and Mr. Ross's "gentleman's real head of hair," and Jenkins's "patent aperitive fountain," and Captain J. Rhodes Pidding's "royal Howqua's mixture," and Rowland's "incomparable oil macassar," &c. &c.—They have but to get the literal additions to which it is impossible to dispute their title—C.H.A.R.L.A.T.A.N.s, and Q.U.A.C.K.s, to be furnished forth in undeniable fashion, and armed at every point to take the field against the absurdities of professional decency.

But we have travelled a long way from the purpose we had before us when we set out with this notice, which was simply to notify to our readers that the Professor of Surgery in the University of Edinburgh had seen fit to send the substance of his systematic lectures on surgery to the press, and thereby made us Tramontanes partakers of the entertainment he is wont to set before his class. And we beg to say, that we thank him for the pains he has taken.

When we look at the elementary works that are available to the student in the present day, in comparison with those that were accessible to him no more than some quarter of a century ago, we see that he now enjoys immense advantages. In our hot youth, "when George the Third was king," we had such an elementary work to cool our zeal for surgery upon, as Benjamin Bell's "System," in seven volumes 8vo. ! or, reading German, we had Richter's "Anfangsgründe"—a word, by the way, which so tickled our curiosity, that seeing it constantly quoted in Cooper's Dictionary, we learned German in order to understand its meaning—in at least as many tomes. To be sure there was John Bell's "Principles," one of the cleverest and most engaging professional books ever written; but that was inaccessible to the poor student from its price, to say nothing of its size—four vols. 4to. ! In short, there was nothing for us but Cooper's "First Lines"—first lines, indeed, and dry as the remainder biscuit after a twelvemonth's voyage, though spiced by the admirable Dictionary, had the juveniles been recommended to it, but they were not. At the present time the student of surgery has half a dozen excellent works to select from: he has "Liston's Elements"—a book with more learn-

ing than the paucity of quotations would lead one to suspect; Syme's "Principles," an admirable work, terse, sententious, full of meaning, carefully put together, a sure guide; Druitt's "Vade Mecum," an unsurpassable compendium, not only of surgical but of medical practice. And then, for the manual department and much more besides, he has Liston's "Operative Surgery," and Fergusson's "System of Practical Surgery"—both works of the highest stamp. Finally, he has Professor Miller's "Principles." We do not venture to direct the student's choice. Men are sufficiently apt to think the last the best, particularly in science; and it is certain, indeed, that he who has the mind and science which we look for in a teacher at the present day, has always an advantage over his predecessors. Although there are several works, then, of the same scope and purpose as Professor Miller's, we are pleased to have it; as an improvement, we will venture to say, upon all that has gone before it, we bid it welcome.

The work is manifestly calculated for the student, not for elderly gentlemen who wear glasses. Having, nevertheless, in discharge of our critical duties, to look into its pages, we have been led unconsciously somewhat to strain our eyes over them; for, in truth, we found the matter so pleasantly put together, that we were induced to refresh our memory upon more than one point of practice, and to ascertain whether any change had come over the spirit of chirurgery since we listened to John Thomson in the north, to John Abernethy in the south, and to the venerable Baron Boyer on the other side of the channel. No question about it, science, surgical science, has advanced; and we are well pleased to have lived in times that have done so much to clear up fundamental principles. The theory of surgery but few years ago was a chaos in spite of the vaunted labours of Hunter; and despite of all that Thomson gathered on inflammation, no mortal knew what inflammation was. At the present time all is order, and harmony, and light; and the labour of learning, despite the accumulation of materials, has become vastly less than it was. In the inductive sciences individualities extend, generals shrink, or the new individual

is absorbed without his presence being perceived; he is but one of the rank and file; he stands up before us among the 100,000 men all clothed and accoutred alike, obedient to the same command, apt to discharge the same offices, needing no particular attention; and so it comes to be strictly true, as Monsieur Pibrac said long ago, that "Nous perdrons une grande partie de notre savoir, si nous étions débarrassés de toutes nos erreurs;" a conceit, or sentiment, which Mr. Abernethy translated in some such way as this: "Increase of knowledge is like increase of nothing else; it is attended with a shrinking in the mass." The seven volumes 8vo., the four volumes 4to., are shrunk into a single post 8vo. volume of some 700 pages; and yet these contain more of positive information than the collected 3,500 8vo., or the 2,000 4to. broadsides that preceded them. Professor Miller, from his position and experience, had a title to come before the world as the author of an elementary work. We are happy to be able to say, that, in our opinion, he has written an excellent one.

The book is inscribed to Mr. Liston, who may be said to be the professional parent of both the professors of surgery, in the University of Edinburgh; Mr. Syme, as well as Mr. Miller, having been his pupil, and having also dedicated his book to his old friend and instructor.

MEDICAL GAZETTE.

Friday, October 18, 1814.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medice* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO

THE MEDICAL PROFESSION BILL.

THE REGISTRATION OF STUDENTS CLAUSE;
THE CONSTITUTION OF THE EXAMINING
BODIES, AND THE EFFICIENCY OF EXAMINATION CLAUSES.

It is obviously intended by the framers of the Bill that the Council of Health and Education shall be supreme; it will have more power over its subordinates than is possessed by any other assembly or convocation of individuals in this country, unless it be the House of

Commons in parliament assembled. Clause the 22d enacts that no bye-law to be made by any of the Royal Colleges of Physicians or Surgeons of England, Scotland, or Ireland, shall be of any force until a copy thereof, with the seal of the College propounding it, shall have been laid before and approved by the Council of Health and Education. We do not know that this was very necessary; we own to the infirmity of liking to see men left to govern themselves. True it is, the bye-laws of some of our medical Colleges have sometimes been indifferent enough; but it is an experiment to be made whether they will be any better with the revision of the central Council; with our free press and open discussion we have long ceased to be afraid of any iniquity being committed and persisted in; redress was always had at last. The Council of the Royal College of Surgeons in London, responsible to nobody, would never have ventured to do what the Royal College of Surgeons of England have done in conformity with the provisions of the New Medical Bill.

Clause 23d authorizes the Council to make regulations for registering the medical and surgical students by the proper officers of the several hospitals or medical or surgical schools at which they study, who may exact a fee for such registration not exceeding ten shillings in each case, the fee to be remitted to the secretary of the Council of Health and Education, and to be applied towards the expenses of the Act. Returns are farther to be made to the Council of the students, in such manner and form as the Council shall direct; and no hospital or school shall be recognized by any of the licensing Royal Colleges which shall neglect or refuse to give due effect to such regulations as the Council may make.—All who have experience of medical students will see the propriety, the necessity, of some such regulation as this—

verily as we come into close contact with the practical clauses of this Bill we begin to be somewhat in love with it—we would willingly excuse something that we think might be better—and who knows but that by labouring zealously and candidly at the measure, we may get what appears amiss in it made better? for that which we freely admit to be excellent in its provisions. The system of registration must be very different from that pursued at present at Surgeons' College and Apothecaries' Hall. There, it is notorious that the young men sign for one another; and not unfrequently the signer is in London only for the day on which he signs. We have heard a friend speak of the exultation and amazement he experienced the first winter he lectured, at the number of students who signed upon a requisition from the College of Surgeons for a return of the students attending each class; he thought he was to deliver himself upon his unpopular subject of Practice of Medicine to crowded benches, instead of to ten or a dozen. He soon discovered his mistake: the gentlemen registered; they did not mean to attend; and the lecturer by and by lost caste for ever, by refusing to sign certificates of regular attendance for individuals whom he had never seen since the signing day at the beginning of the session, till its approaching close. The Council of Health and Education must be warned upon this point; if they can devise machinery to make regular attendance upon lectures imperative, to secure the presence of students in the lecture room, and to free the lecturer from the odious business of setting his name to what he knows not to be true in almost every alternate instance, at some schools, they will do much, very much, to advance the science and the practice of medicine in this country. The vast amount of labour bestowed, and of thought expended, by lecturers on the

several branches of medicine, is unimagined by all, save the individual who has gone through the arduous duties of the teacher. If the Council approve of attendance on lectures being required, let them also secure that attendance be given. The teachers themselves cannot do this.

It strikes us that there is one important omission in this Registration of Students Clause; it is, that no information is taken as to previous study. But we hold it of the last importance that he who is to be the future practitioner of medicine, should, in the first place, be the liberally educated man. We would have an examination preliminary to registration, made imperative, to which none should be admitted who had not completed his 17th or 18th year. This we are disposed to look upon as the first and most essential step to be taken, in any attempt to raise the character of the medical profession. If the framers of the bill thought an inferior class of practitioners necessary to meet the wants of the labourer and artizan—which we do not—we would still entreat them for the preliminary examination from the aspirant to the higher grade—from him who aimed at the dignity of Physician or Surgeon. But probably this is held matter of detail, and is left to the licensing colleges to require: we, for our part, esteem it of such vital importance, that we should have been pleased to have seen it forming the subject of a distinct clause in the Bill.

The 24th clause provides that where the concurrence of more than one body is required for qualifying parties for registration by the Council, the examination may take place either separately before examiners appointed by each body, or before a joint board of examiners to be appointed by each body separately or conjointly, in such number, manner, and form, and at such times and places, as the bodies, with the ap-

proval of the Council, shall agree upon among themselves; further, the fees of examination are to be divided between the bodies in such manner as they may agree upon among themselves, or, in case of difference, as the Council shall determine on with respect to any point upon which they shall not be agreed.

As we interpreted the Bill at first, and looking only at an early clause, we did not observe this provision for harmonious or simultaneous working between the candidate and the several examining bodies—we make the framers of the bill the amende, and own to our short-sightedness.—Surely an efficient and fair examination ought to be the result of what may be called open questioning by gentlemen members of, and appointed by, two distinct royal Colleges, in presence of each other. No question will be propounded that ought not to be answered; no one, failing to answer examining bodies so constituted, will think himself unfairly dealt by when he is referred back to his studies.

The division of fees is another important element in this clause. It is its wealth that has enabled the Royal College of Surgeons of England to strengthen itself with its magnificent museum and numerous library; it is its poverty that has prevented the Royal College of Physicians from doing aught in the same direction for the accommodation of its Fellows and Members, and that leaves it even at the present hour without other hold upon our consideration and regard than it has from its antiquity, from its historical associations, and from the learning and character of its individual associates. With the fees of licentiates divided between it and the College of Surgeons, the College of Physicians will be able to do much more than its funds have yet permitted it to accomplish; it may by and by have a pathological collection second to none in Europe, and a library equal to the one in Lincoln's Inn Fields. The profession, instead of

one, will thus have two grand repositories of facts—that is, of experience—to appeal to; and if the accumulated experience of mankind be of any value, who shall say that this will not conduce to the best ends? We see wider and better prospects for our profession in this wise and excellent provision.

The 25th clause provides for the efficiency of the examination, and need not detain us. It is good,—always admitting the supreme authority of Council to be good, which we are inclined to do in the present instance. The examining bodies are to make returns to the Council of the particulars of their examinations, at which any Secretary or any member of the Council may be present.

MOVEMENT IN THE PROFESSION.

WE do not profess to keep, or to render, an account of every meeting that takes place throughout the country on the subject of “The Bill.” Those of which a notice by the means of a provincial paper is sent to us, however, we have hitherto noticed again: these meetings are, in fact, the best feathers the Minister can have by which to know how the professional wind sits.

On Tuesday, the 8th inst., the members of the medical profession residing in Salisbury and its neighbourhood, met in the Council Chamber of the County town, Dr. Grove in the chair, when the sentiments expressed were a good deal marked by distrust and doubt. Whilst the meeting hailed such portions of the bill as are calculated “to increase the influence of the profession and improve its character, it cannot but regard with a feeling of regret and disappointment those general principles which remove all restrictions from the practice of medicine, as a measure most dangerous to the public, and most prejudicial to the best interests of the profession.”

A petition to parliament was agreed on, to the effect “that although the meeting regard with satisfaction some of the provisions contained in the projected Bill of Sir James Graham, yet as a whole they view it with disappointment, disapprobation, and alarm. While

it professes to protect the medical profession and public health, they believe it to be directly and most grievously injurious to both. That it offers direct encouragement to empiricism with its enormous and incalculable evils, tends to degrade the educated and legalized practitioner, and to discourage and retard medical science.”

On Thursday, the 10th inst., a numerous meeting of the profession was held in the Theatre of the Philosophical Institution, Bristol: Mr. Mortimer in the chair. The chairman in introducing the business said “He thought that they would all agree with him that the object of Sir James Graham was to benefit the profession, by raising the standard of education, and thereby raising the general respectability of the whole profession; that was avowed in the preamble; and he thought that they would also agree with him that they should discuss it with calmness and good temper. The Government in this bill had shewn a disposition to grapple with the subject of reform, in trying to remove some of the anomalies connected with the practice of physic and surgery; and it would now be their fault if they did not assist it in making the bill as perfect as possible, as the government had purposely given them that opportunity, by leaving it on the table of the House just previously to the recess, and thereby soliciting the opinion of the profession upon the subject: for this courtesy they were much indebted to Sir James Graham. The Council of Health and Education was an important clause in the new bill, wherein the Government retained the power of forming a large portion of its members by the crown. The register, also, of all licensed practitioners under the titles of physicians, surgeons, or licentiates in medicine and surgery, appeared in its general character very good; but the penal clauses were insufficient for their proposed end, and left those who had passed the ordeal of strict examination, without protection against the unprincipled quack and the ignorant pretender.

Dr. Symonds—and we make a point of quoting every word that a man so distinguished said on the occasion—in rising to propose the first resolution, “begged to state that he should not have taken any part in the present meeting had he not been apprised previously that it was intended that it

should be conducted in a conciliatory spirit, for he thought that the profession generally were greatly indebted to Sir James Graham for having introduced the measure; and he certainly was the first Minister of the Crown who had brought forward such an important and general measure for the reform of medical practice. In doing so there could be no doubt but that he must have had great difficulties to contend with; but he certainly thought that as a whole the bill had been carefully framed. As regarded that portion of it which constituted a Central Council of Health, to whom appeals might be made, &c. he thought there could be but one opinion as to the great advantages which must result from the appointment of such a body; there could also be but one opinion as to the register of qualified practitioners: still, however, while he confessed his approval of the bill as a whole, he was not blind to its faults, the principal of which was the want of proper protection for the legally qualified practitioner. He thought that they ought to demand such protection, and that the ignorant, unqualified, contra-band practitioner, should be subject to penal enactments. He knew that it might be said that the register was open to the public, and that the public thus had their choice of qualified practitioners: it might also be said that it would be contrary to the recognised liberty of Englishmen were they not allowed this choice, for if they were foolish enough to apply to improper persons they suffered death for their folly. This was not, however, the question; for was it right that our Government should allow any ignorant empiric to practise? was it justice for the Government to encourage imposture? was it correct that the public health should be subjected to ignorant pretenders? He did not think that they ought to go before the Government with an *argumentum ad misericordiam*, but he did think that the course of education which they had to go through previously to their entering the profession, and the toils they had to undergo in its practice, entitled them to something beyond mere justice; that it entitled them to protection in the exercise of that profession which it had cost them so much toil and expense to acquire. He was sure that every one present knew that the

medical practitioner had to toil from early dawn to dewy eve, and frequently lost his rest for perhaps three nights in a week, and for which, if his remuneration at all equalled that of some persons who were employed in solely ministering to the artificial tastes of mankind, there was an immediate outcry that he was realising a wonderful income: too often, however, the medical man received but a scanty remuneration for his anxious care, and the important services which he rendered the public."

Various resolutions in harmony with the spirit thus evinced, and laudatory of the Company of Apothecaries, were passed.

At the Meeting at KENSINGTON, — Mr. Merriman in the chair, — Mr. Godrich, in moving the first resolution, said the bill would, he was confident, afford no real protection to the profession; that, in fact, it was an attempt to lower the general practitioners; that it tended to separate the duties of the surgeon and physician, which he disapproved of, and to throw open the profession to every charlatan. The first resolution was to the effect that the repeal of so much of the act of 1815 as prohibits any unlicensed person from practising, without substituting some other protective enactment, would be productive of serious evil both to the public and general practitioner.

Dr. Ogier Ward moved the second resolution, which characterized the constitution of the Council of Health, without any representative of the body of general practitioners, as most unjust, and derogatory to the class.

The third resolution was moved by Mr. Wooley, and was to the effect: "That this meeting cheerfully bears testimony to the satisfactory manner in which the Society of Apothecaries have carried out their act of 1815, as evinced by the high standard of medical education which they have established. And further, that it is the opinion of this meeting that the regulations relating to the medical education of the general practitioner, and the medical examination as to his efficiency, should be committed solely to members of his own grade, which has for nearly 30 years so ably performed those duties, and rendered thereby such essential service to the country and the profession, and not, as proposed by the bill, to persons whose interest it may be to lower the

standard of education, and lessen the efficiency of that branch of the profession."

Mr. Pollock proposed the fourth resolution, which was as follows:—"That while this meeting agrees in the propriety of having a general registration of all the legally qualified medical practitioners, it must object, first, to a tax being laid upon men who have already been put to a great expense in paying the admission fee of the existing medical corporation; and, secondly, that the registration clauses do not effectually preclude by their penalties the influx of uneducated and disqualified men into the profession."

The cordial thanks of the meeting having been voted to the *Times* and Mr. Wakley, for their powerful advocacy of the principle of protection to the public health, the meeting separated.

This was obviously a meeting actuated by a very different spirit from the Bristol meeting. It was what may be called a radical meeting.

We have, farther, notices of meetings held at Wrexham, where the usual resolutions were passed, and a petition adopted, from which the following is an extract: "That as, in framing the proposed Bill, it has been considered expedient that certain qualifications shall be required in those Members of the Profession who may be appointed to any public situations, your Petitioners would humbly submit to the consideration of your Honourable House the necessity of affording to the public in general, in the far more extensive field of private practice, the same protection which has been very wisely thought necessary for inmates of Hospitals and Workhouses."

There was also a meeting at Woolwich on the 11th, at which it was resolved unanimously to petition the House of Commons against several objectionable clauses contained in Sir James Graham's Bill.

POISONING WITH RADIX SAMBUCI.

A WEAKLY woman, 54 years of age, who had been sick all day, and thrown up a quantity of greenish stuff, which she regarded as bile, was persuaded by her husband to take two table-spoonfuls of the juice of the fresh elder root, which he himself had dug up, shaved down, and pressed. The woman complained of severe pain in the abdomen. She was ordered some infusion

of senna, but did not take it, as the bowels began almost immediately to act copiously. Next day the symptoms were those of enteritis: paralysis of the lungs followed, and the patient died. The body was not opened. —DR. SCHOLLMEYER, *Medicinische Zeitung*, No. 8, 1844.

NOTE FROM MR. GAY.

To the Editor of the Medical Gazette.

SIR,

IN a late number of a cotemporary journal, Dr. Costello has announced me as one of *his colleagues*. May I be permitted to state, through the medium of your journal, that I am not a colleague of, nor in any way whatever connected with, that gentleman.

I have the honour to be, sir,

Your obedient servant,

JOHN GAY, F.R.C.S.E.

Surgeon to the Royal Free Hospital, &c.

12, Pavement, Oct. 14, 1844.

APOTHECARIES' HALL.

Gentlemen who have obtained Certificates, Thursday, October 10. — W. P. Beloe, Lynn Regis, Norfolk. — W. Leapingwell, Good Easter, Essex. — H. James Stokes, Rochester, Kent. — W. Cholmeley, Wainflete, Lincolnshire. — S. J. Remnant, Tavistock Square.

MORTALITY OF THE METROPOLIS.

Deaths from all causes registered in the week ending Saturday, October 5.

Dropsy, Cancer, Diseases of Uncertain Seat	109
Diseases of the Brain, Nerves, and Senses ..	150
Diseases of Lungs and Organs of Respiration	252
Diseases of the Heart and Blood-vessels	32
Diseases of Stomach, Organs of Digestion, &c.	65
Diseases of the Kidneys, &c.....	6
Childbed	7
Paramenia.....	0
Ovarian Dropsy	0
Disease of Uterus, &c.	1
Arthritis.....	0
Rheumatism.....	2
Diseases of Joints, &c.	2
Carbuncle	0
Phlegmon	0
Ulcer	1
Fistula	0
Diseases of Skin, &c.	1
Old Age or Natural Decay.....	47
Deaths by Violence, Privation, &c.....	36
Small Pox	51
Measles	27
Scarlatina	87
Whooping Cough	16
Croup	6
Thrush	11
Diarrhoea	15
Dysentery	2
Cholera	0
Influenza.....	1
Ague.....	0
Remittent Fever	1
Typhus	22
Erysipelas	7
Syphilis	1
Hydrophobia	0
Causes not specified	3

Deaths from all Causes..... 961

WILSON & OOLIVY, 57, Skinner Street, London.

THE LONDON MEDICAL GAZETTE,

BEING A
WEEKLY JOURNAL

OF
Medicine and the Collateral Sciences.

FRIDAY, OCTOBER 25, 1844.

SUBSTANCE
OF
CLINICAL LECTURES

DELIVERED BY MR. STANLEY,

*At St. Bartholomew's Hospital, during the
Summer Session 1844.*

*Treatment of Transverse Divisions of the
Larynx and Trachea.*

THE rule of practice usually observed in the treatment of these injuries, is to trust to position alone for the approximation of the divided structures. The following cases, of recent occurrence in the hospital, have conveyed to us the practical lesson, that other measures may be requisite to counteract the retraction of the lower portion of the larynx or trachea, consequent on a free division of either structure in the transverse direction.

An elderly man passed a razor across the thyroid cartilage, the lower portion of which retracted freely, leaving a wide aperture in the front of the neck, through which the ventricles of the larynx and ligaments of the glottis could be plainly recognised. No sutures were used. Position alone was relied upon as the means of approximating the divided parts. With the head and neck inclined downwards and forwards, the edges of the wound in the skin came readily into contact, and it was expected that with the healing of the soft parts around the larynx, the two portions of the thyroid cartilage would gradually approximate; but it proved otherwise. The integuments cicatrized around the divided edges of the thyroid cartilage, but its lower portion remained firmly fixed in the depressed position. During the cicatrization of the integuments, the aperture in the larynx contracted in some degree, but it was still considerable. After several months had elapsed, as no further change was apparently going on in the parts, various suggestions were offered as to the means likely to raise the lower portion of the la-

ryn timer, and to close the aperture in it. So firmly fixed were the two portions of the thyroid cartilage by the cicatrization of the soft parts around them, that it did not appear probable that these objects could be attained by means of sutures passed through the portions of the thyroid cartilage, in the view of drawing them together. The only available suggestion was, to separate the firmly cicatrized tissues from the lower portion of the thyroid cartilage, in the hope that when thus liberated it would rise to its proper position. I determined to try this plan, but had proceeded a very little way with it, when I discovered, close to the wound I had made, the pulsations of two large arteries, which I presumed to be the superior thyroids, the division of either of which might be expected to cause serious mischief, from the blood flowing into the larynx. Consequently, I desisted from any further operative proceeding. The patient left the hospital with the aperture in the front of his neck, through which a little finger could be readily passed into the larynx, and he was unable to articulate distinctly; but this appeared to be the only material inconvenience he suffered.

A woman, aged 62, in a fit of insanity made an extensive wound across the lower part of her neck with a carving-knife, dividing the trachea, and exposing the carotid arteries; it was apprehended, besides, that the œsophagus had been injured, from the circumstance that liquids taken into the mouth directly escaped through the wound, and continued to do so for a few days. The lower portion of the trachea retracting very freely, the wound presented a wide and deep gap in the front of the neck; at the bottom of which could be recognized the glottis above, and the orifice of the trachea below. No sutures were employed; the head and neck were strictly kept in the position favourable to the approximation of the divided parts. The reparation of the soft structures proceeded favourably; but it was observed

that the contraction of the outward wound was not accompanied by any approximation of the upper and lower portions of the trachea; and farther, that a narrowing of the lower orifice of the trachea was gradually taking place, with increasing difficulty of breathing, accompanied by a profuse discharge of thin mucus, secreted by the lining membrane of the trachea and bronchi. The orifice of the trachea became reduced to the diameter of a goose-quill, and thus scarcely permitted the passage of sufficient air for the maintenance of life. Under these circumstances she gradually sunk, and died about two months after the infliction of the injury. On examining the body, it was found that the narrowing of the orifice of the trachea was the result of the thickening and puckering of the surrounding tissues, and that the division of the tube had taken place between its first and second rings; but it did not appear that the trachea had been completely divided; a portion of the mucous membrane at its back part had apparently been left undivided; but it was not sufficient to prevent the lower portion of the trachea sinking deeply in the neck. The lungs were healthy.

The foregoing cases shew the inadequacy of position alone to obtain the approximation of the parts, when the larynx or trachea have been freely divided in the transverse direction, and consequently suggest the propriety of using sutures in the treatment of these injuries. But sutures passed through the soft tissues covering the larynx or trachea will be of no avail; to be effective, they must penetrate the cartilages themselves, or the fibrous tissue which unites them. Moreover, the right time for employing sutures must be chosen. During the first period of the case they are scarcely admissible, from their probable effect in preventing the free escape of the blood through the outward wound; nor should they be delayed to the period when the integuments, &c. have firmly cicatrized around the lower retracted and sunken portion of the larynx or trachea. The following observations have been recorded by Rust of Berlin, shewing that he had observed the difficulties which were met with in the foregoing cases, and that he had, as it appears to me, rightly considered the means of obviating them. Rust observes, that "in wounds dividing only partially the trachea or larynx, a suitably inclined position of the head and neck is generally all that is required to effect a speedy union; but where the larynx or trachea is completely cut across, it becomes expedient to have recourse to sutures. The tendency of the lower portion to sink down from the upper is often so great, that we must not limit our sutures to the cellular tissue, but pass them through the substance of the trachea itself, and even through the cartilages of the la-

rynx." He then relates a case of cut throat which occurred in Charité Hospital at Berlin, where the thyroid cartilage was divided, and adds, "that in this patient, the tendency of the lower end of the divided larynx to sink down from the upper, was such as to occasion the necessity of a suture through the substance of each portion of the cartilage (thyroid), that sutures passed simply through the soft textures repeatedly gave way, and that the healing in this case was perfect."*

In the narrative of the case of the female who divided her trachea with a carving knife, it is mentioned that during the first few days, liquids swallowed directly flowed through the wound in the neck, leading to an apprehension that the œsophagus was injured, which certainly had not occurred. I have noticed this circumstance in other instances of wounds in the larynx or trachea, whether inflicted by the surgeon or by the hand of the suicide: thus, after the operation of tracheotomy, I have seen the fluid which had been swallowed flowing through the slit in the trachea. It would accordingly appear, that a temporary loss of the irritability of the glottis is the consequence of a wound in the larynx or trachea.

Subcutaneous division of tendons.

There are two cases in the hospital well serving to illustrate the variety of circumstances under which the subcutaneous division of tendons may be required.

Talipes equinus in both limbs of an adult, from rigidity and shortening of each tendo-Achilles, gradually arising without obvious cause. Division of the tendons.

A man, 22 years of age, had during the preceding two years felt a gradually increasing inability to walk with ease and firmness. On examining his limbs there was found to be rigidity, with apparent shortening of each tendo-Achilles, which, in the erect posture, prevented his heels resting on the ground. The weight of the body had, in consequence, been chiefly transmitted through the anterior or digital ends of the metatarsal bones, and the feet were becoming deformed, with shortening from the heels to the toes, and deepening of the concavities of the soles. The remedy for this condition of the limbs appeared to be, the section of each tendo-Achilles, in order that, by the elongation of the muscles of the calf, the heels might readily come to the ground. Accordingly I divided each tendo-Achilles; and in a few days afterwards, the punctures in the skin being healed, I placed one limb in Stromeyer's apparatus, and the other in Scarpa's shoe, as modified by Dr. Little; this was done for the purpose of affording to the stru-

* Aufsätze und Abhandlungen von Dr. Joh. Nep. Rust. Vol. ii. p. 222.

dents a view of the mode of action of each instrument, in gradually bringing the foot to a right angle with the leg. The use of these instruments was continued about six weeks, and then a gentle use of the limbs was permitted. By degrees the muscles of the calf regained their power of action; and in about two months after the sections of the tendons the man left the hospital, walking well, with his heels coming readily to the ground.

This case is interesting as an example of shortening and rigidity of the tendo-Achilles in the adult, arising without discoverable cause, and as shewing the talipes equinus thus produced to be curable by the same means as the ordinary cases of this congenital distortion of the foot.

Extreme contraction and immobility of the knee-joints, limited motion of the ankle-joints, consequent on paraplegia; division of the ham-strings, and of the tendo-Achilles in each limb.

This patient is a man 53 years of age: he stated, that about two years ago, he slept in damp sheets, soon after which he felt pains in his loins, and then a numbness in his hips, which gradually extended through his lower limbs, leaving them powerless as far as motion was concerned, and with sensation in some degree impaired; he lost, besides, the power of emptying his bladder, and of retaining the feces. In this condition he was admitted into the hospital; strychnine was given apparently with good effect upon the paralysed parts, but at the same time a large slough formed from pressure in the lower part of his back; on the separation of which, leaving a freely suppurating sore, the condition of the limbs became manifestly improved. He remained fourteen weeks in the hospital, and at the end of this time was able to move about a little, but not to stand firmly. After he left the hospital his knee-joints became gradually contracted and immovable, and continued so to the present time. On his re-admission into the hospital two years after the attack of paraplegia, the following was his condition:—Each knee-joint was immovably fixed in the state of extreme flexion; the ham-strings were contracted and rigid; and the cellular tissue around them had become indurated, and firmly agglutinated to the tendons, whereby their outline could not be distinctly traced through the integuments. Such were the unpromising circumstances of this case. If the knee-joints could be straightened, and mobility restored to them, yet not improbably there had been disease of the spinal cord producing the paraplegia; and if so, of course there could be but little prospect of the muscles regaining their contractile power. So rigid and indurated were the tissues in the popliteal spaces, that, by mechanical force alone, extension of the

knee-joints seemed impracticable. Division of the ham-strings was evidently a necessary part of the treatment; but from the indistinctness of their outline, this could not be so easily done as in ordinary cases. To avoid all risk of injuring the popliteal or peroneal nerve, or the popliteal vessels, I deemed it prudent to divide the rigid ham-strings, and the surrounding indurated cellular tissue, by small subcutaneous incisions many times repeated, in both limbs, applying after each operation the apparatus for extending the knee-joint. Thus I proceeded for many months, very gradually effecting the extension of both knee-joints, and feeling justified in the hope of success by observing that as the joints were slowly straightened, they became moveable, and the muscles shewed no want of power to act on them. As the functions of the knee-joints were restored, it became evident that the action of the ankle-joints was impeded by the rigidity of each tendo-Achilles; accordingly, I divided both these tendons, and afterwards applied Stromeyer's foot-board to each foot. I also divided the extensor tendon of each great toe, as it was rigid, and kept the toe constantly raised. To aid the relaxation of the indurated tissues around the knee and ankle joints, warm baths, with friction of the limbs, were perseveringly employed. The result of these proceedings is, that at the end of eighteen months from their commencement, the man, on leaving the hospital, is able to walk without difficulty. Undoubtedly, but for the subcutaneous division of the contracted tendons, this man would have been a cripple for life; and it is well, again, to notice the fact, that the crippled condition of his limbs originated in paraplegia, complete as far as motion was concerned; and consequently, at the commencement of the treatment, there appeared but little prospect of its success. It may now be inferred that the paraplegia was produced by some other cause than change of structure in the spinal cord.

In the narrative of the first of the preceding cases it is stated that the object in dividing the tendo-Achilles was to obtain the elongation of the muscles of the calf, whereby the heels might readily rest on the ground; this statement may seem to require some explanation; it is founded on the observations of Stromeyer*, and recently of Mr. Tamplin†, concerning the phenomena which succeed to the division of tendons, from which it appears that the new substance between the ends of a divided tendon, like the cicatrix in other tissues, gradually contracts to its tota disappearance, and accordingly that in the examination of the tendo-Achilles at a distant period from its section no new substance

* Stromeyer, Beiträge zur operativen Orthopädie.

† MEDICAL GAZETTE, Sept. 1841.

is discoverable between its divided ends; indeed, scarcely a trace of the cicatrix remains. Another view of the matter might be suggested, that the newly-formed substance so perfectly acquires the characters of original tendon as not to be distinguishable from it. But, from the observations which have been made on this interesting subject, it seems certain that an actual elongation of the muscles of the calf is the consequence of the division of their tendon, and of the treatment subsequently adopted; that the change which ensues is of the opposite kind to that which was first pointed out by Mr. Hunter, namely, the shortening of muscle and the acquisition of a new sphere of contraction in the shortened state, in illustration of which he placed in his museum the biceps muscle from the arm of a negro shortened one-half of its length in consequence of the humerus having been fractured and allowed to unite with "the ends of the bone riding on one another*."

Compound dislocation of the last joint of the thumb. Of the obstacle to its reduction.

In a case of compound dislocation of the thumb now in hospital, the dislocation was reduced without the least difficulty; consequently but little inflammation ensued in the surrounding parts, and there has been scarcely any constitutional derangement. To this case I allude for the sake of the advantageous comparison it affords with two other cases of the same injury which I had in the hospital; one two years ago, and the other during the last summer. The first of these cases occurred in a middle-aged man; the distal end of the first bone of the thumb protruded through a rent in the soft parts on the palmar side of the joint, and the second bone was thrown backwards, its articular end projecting on the posterior side of the first bone, with the skin tightly stretched over it. So much of the first bone protruded through the wound that it was evident the lateral ligaments were torn; the tendon of the flexor longus pollicis was not visible. Efforts were made for a long time, and by every variety of proceeding, to reduce the dislocation, but in vain; no change could be effected in the relations of the parts. On the next day, with a gentle lateral movement of the second bone of the thumb, it slipped into its place. The wound healed rapidly, and the motions of the joint were perfectly restored. The second case occurred also in a middle-aged man, who, when running, fell, the end of his extended thumb striking the ground; the consequence was, a compound dislocation of the last joint, presenting the same characters as the case just men-

tioned. Here, also, every effort was made to reduce the dislocation, but to no purpose; neither by pulling nor pushing the second bone of the thumb could its articular end be stirred from the back of the first bone. These attempts were again ineffectually made on the second day after the occurrence of the injury; and now, in the view of the reduction of the dislocation being impracticable, it was deemed expedient to amputate the end of the thumb, which was done through the dislocated joint. On examining the amputated bone, the tendon of the flexor longus was found to be still attached to it.

Here are three cases of compound dislocation of the last joint of the thumb; one reduced without difficulty, the second, after the failure of forcible efforts, reduced by a gentle proceeding, and the third not reduced at all. And why this difference? it depends, as it has appeared to me, on the position which the tendon of the long flexor muscle happens to occupy; that when this tendon has slipped round either side of the first bone of the thumb to its back part, then becoming placed between the first and second bones, it constitutes the obstacle to the return of the second bone into its place. Moreover, the flexor tendon, when thus displaced, will combine with the extensor tendon in drawing the second bone over the back of the first bone, and in firmly fixing it in this position. Such was the view of the obstacle to the reduction of the dislocation which the observation of these cases suggested. In seeking further information on this subject, I produced, in the dead body, a compound dislocation of the last joint of the thumb, and having turned the flexor tendon around the side of the first bone to its back part, the reduction of the dislocation was then obviously resisted by the tendon: two competent individuals failed to effect the reduction; whilst a third was trying, the tendon slipped into its place, and the dislocation was instantly reduced. Of course, in the living body, the action of the muscles upon the flexor and extensor tendons must greatly increase the resistance to reduction. In the dead body, the likeliest mode of reducing the dislocation appeared to be by keeping the second bone extended, and at the same time giving to it gentle lateral movements which might assist the return of the tendon into its place. In the view that there is a mechanical obstacle to the reduction, which gentle proceedings are quite as likely to remove as forcible efforts, the impropriety of employing such efforts is obvious, such efforts being, it is well known, most severely painful, and occasionally they have been productive of the worst effects. In one case which I witnessed, the repeated employment of force to reduce this dislocation was followed by gangrene of the end of the thumb; in another, by tetanus; and in a third, by loss of life from the

* Physiological Catalogue, p. 1, Royal College of Surgeons.

severe constitutional derangement which ensued.

I have found on record the following evidence in confirmation of the view here set forth of the obstacle to the reduction of the dislocation of the second, and alike of the first joint of the thumb. Mr. R. W. Smith reported to the Pathological Society of Dublin, a case of luxation of the second phalanx of the thumb upon the dorsum of the first. "The head of the first phalanx was forced through the integuments. The flexor tendon was forcibly displaced, and lay between the first and second phalanges. It was evident that reduction would have been very difficult, if not impossible. Mr. Brabazon was apprehensive of tetanus ensuing; he therefore preferred amputation*." Sir George Ballingall has recorded a case of dislocation of the first joint of the thumb; in the narrative of which, it is stated that by forcible extension "the ends of the bone appeared almost disengaged, but could not be made to resume their natural position. The patient was extremely faint, and while in this state, I was pressing gently on the aneal aspect of the joint, endeavouring to push the dislocated bone into its place, when I unexpectedly felt the phalanx slip from under my fingers, and resume its proper situation†."

So many cases have been reported to me of dislocation of the thumb, in which, as in the instance related by Sir G. Ballingall, after the failure of repeated trials with the employment of force, the bones have unexpectedly slipped into their place, that I can have no doubt respecting the course to be pursued in these injuries, which should be, not to employ great force in any mode or direction, but rather to trust to the influence of gentle movements of the parts in effecting the removal of the obstacle to reduction, which I believe to be the displaced tendon of the flexor muscle.

Subcutaneous encysted tumor, containing the acephalocyst hydatid, echinococcus.

I recently admitted into the hospital, a healthy young female, with two subcutaneous tumors, one in the front of the forearm, the other in the front of the chest immediately above the mammary gland. Each tumor was about the size of a shilling, firm, oval, and flattened, and readily moveable in the cellular tissue in which it was lodged. On the first examination of these tumors, doubt arising on the point of their containing a fluid, I pierced each tumor with a grooved needle, when from each, a thick puriform fluid escaped, and accordingly they were considered to be cystic abscesses; that is, abscesses circumscribed by distinct cysts.

Tincture of iodine was applied for some time to each tumor, but with no marked effect. I then decided upon the free evacuation of the contents of the cyst; this was first done with the tumor in the arm, and nothing else was observed to escape from it than a thick, brown, puriform fluid; but from the tumor in the neck, there escaped with the puriform fluid an acephalocyst hydatid of the size of a marble. Free suppuration subsequently took place in the wound, with obliteration of the cyst in which the hydatid was lodged. From the identity in the character of the tumor in the arm with that in the neck, it probably also contained an acephalocyst hydatid, which was cut into in laying open the cyst; and thus it may have escaped through the wound without being observed.

On examining the hydatid which had been removed from the neck, it was found to consist of an opaque, white, globular cyst, filled by a transparent fluid. Also, we observed in the cyst a mass of mucus; on spreading this out between two pieces of glass, and examining it with a moderate magnifying power, we had a perfectly clear view of the curious little worm which has been designated by naturalists, echinococcus; belonging to the class of internal parasites named by Rudolphi cystic entozoa.

The acephalocyst hydatid, it is well known, is not unfrequently found in various regions of the human body in the intermuscular cellular tissue, and but rarely in the subcutaneous tissue. The opaque, white, globular cyst, filled by transparent, probably sero-albuminous fluid, is now regarded by naturalists as the abode of the organized being, designated echinococcus, from one of its characters, the circle of spines or tentacula surrounding its mouth, by which it is supposed to take in its food. The echinococcus has been discovered in a cyst within the liver, also in the urinary bladder of man, but the present is, I believe, the first instance of its recognition in the subcutaneous hydatid.

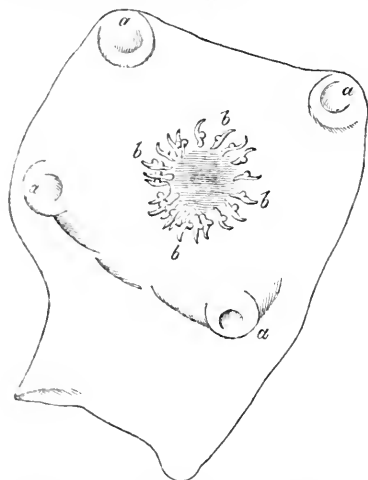
It will be remarked, that in the case which has been described, a distinct cyst enclosed the hydatid, and hence the characters it presented of an ordinary subcutaneous encysted tumor. This cyst is of course to be considered as in no way concerned in the formation of the hydatid, but as the consequence of the irritation it produced in the surrounding cellular tissue; and to the same cause we may attribute the suppuration within the cyst. In this view of the formation of the cyst, its removal would be presumed to be unnecessary as the means of preventing the reproduction of the hydatid, and experience proves it to be so. I have known several instances of the removal of hydatids by operation from various regions of the body without their enclosing cysts, and the result was perfectly satisfactory.

The subjoined sketch represents the mag-

* Dublin Journal of Medical Science, vol. 25.

† Edinburgh Surgical Journal, 1815.

nified view of the echinococcus removed from the acephalocyst which formed in the cellular tissue of the neck.



a, a, a, a. Four opaque circular spots, believed to be the seat of suckers by which the animal attaches itself to the inside of the cyst.

b, b, b, b. Circle of spines or tentacula surrounding the mouth, by which it is supposed the animal takes in its food.

ON THE PATHOLOGY AND TREATMENT OF OVARIAN DISEASES;

WITH CASES.

BY DR. SAMUEL J. JEAFFRESON,

Physician to the Chelsea, Brompton, and Belgrave Dispensary, &c.

[Concluded from p. 87.]

It is more than probable that the preceding table does not contain all the operations which have been performed; it is to be feared, also, that a natural tendency to publish successful and hold back unsuccessful applications of a new method, may have tended to keep the public in ignorance of some cases of failure, although it must be confessed that the greatest credit is due to those gentlemen who have candidly avowed and described their cases of failure, which, as presenting the causes of non-success, afford beacons of warning to others, and thus present the surest means of advancing the firm and more successful establishment of the very operation on which, by superficial observers, they may be thought to throw discredit. In spite, too, of some pains, I fear that my own table may not be entirely free from errors.

Such, then, as nearly as I can collect,

is the result of 74 ovarian operations. One cannot but be struck at the very first glance with the prodigious proportion—23 out of 74 cases—in which an insufficiency of diagnosis led the operators to attempt that which was in reality impracticable. When such a surgeon as Lizar, backed by all the talent nearly of Edinburgh, has opened the abdominal cavity to remove an imaginary tumor, it cannot be doubted but that many and great difficulties surround this part of the subject; but I must candidly confess, that I believe increased observation and experience, with great care, will for the future render such mistakes proportionately less frequent. This subject is the more deserving the careful attention of operating surgeons, from the fact that the mortality of the whole number of cases is greatly augmented by this source of error; for whilst the mortality was only 14 out of the 51 cases in which the tumors were removed, it was 10 in the 23 in which it was from one cause or other not removed, and consequently 24 in the total number of 74 cases.

As adhesions of the solid tumor or cyst constitute a frequent source of failure, the surgeon cannot be too careful and assiduous in acquiring every means of diagnosis by which he may learn the probabilities of their existence and extent previously to operating; but as these are insurmountable under particular circumstances only, he will do well further to consider, whether any peculiarity in the method of operating will afford him increased facility in overcoming this difficulty. For this, and all other points connected with the mode of operating, inquiry must be directed to the more detailed accounts of each case as published by the respective operators; the objects of my own papers having been, not to instruct the surgeon in those matters which fall exclusively within his province, but to inquire into the general prospects of the operation as a curative means. Without, however, wishing to detract from the merits of other surgeons, it may be right here to draw especial attention to Mr. Walne's "tentative incision;" to Dr. F. Bird's peculiar method, by a moderate incision, so successfully practised by himself; and to Mr. Lane's observations on the advantage of the incision from the umbilicus to the pubes, in this respect

deserve the best attention of surgeons; and it is to be hoped that he will communicate to the profession his experience on this and other subjects connected with the operation. It is worthy of remark, that adhesions, and those too of an extensive and firm character, were present in many of the successful cases.

In comparing this with many other surgical operations, it will be found that, even labouring under all the disadvantages that necessarily surround any new method, its mortality does not exceed, or its success fall far short, of many operations practised and recommended by the best and most experienced surgeons. Such comparison, however, to hold good, must take in the relative natures and risks of the respective diseases, compared with the nature and risk of the operations for their removal. In acute cases—say strangulated hernia and compound fractures, for example—the surgeon, knowing the risks of the disease and the operation, loses not a moment in offering his patient the comparative advantage of the latter; whilst in more chronic affections, as in the instance of stone in the bladder, disease of the joints, and many forms of tumors, such comparison is rendered far more difficult. An operation may speedily rid the patient of his malady, and restore him to health and comfort; or it may, within a few minutes, hours, or days, destroy a life which might otherwise have been prolonged (although with some inconveniences, perhaps) for as many years. It is with this class of operations only that the ovarian section can with propriety be compared.

A disposition seems to exist with some persons to shift off the fatal result of some operations upon other causes. This cannot, I think, be fairly admitted. It is most wise and proper thoroughly to investigate the causes which have led to a fatal termination in any one case, as tending to throw increased light and precision on the after-treatment, and to show how far the disastrous result has been due to previous or subsequent mismanagement, which may in future be avoided, rather than to any thing in the essential nature of the operation itself; and here too, I believe, that the present operation will experience increased precision and success. In this, as in

all other branches of surgery, the dexterous use of the knife constitutes but a part of the art.

The pain and inconveniences of the different forms of ovarian disease, with their risks to life itself, have been already sufficiently discussed, and are, indeed, pretty generally known to professional men; but, unfortunately, no statistical tables of the disease are sufficiently accurate or extensive to enable us to draw an exact average of the duration of life under these diseases. It is, however, to be feared, that rivalry of opinion respecting the propriety of the operation in question, has led one party to over-, the other to under-rate the mortality of these affections. The probable duration of life, and amount of suffering, under the existence of ovarian disease, should be carefully weighed and considered before an operation of so much uncertainty in its result can with propriety be recommended, or even undertaken at the request of the sufferer; and yet it is extremely difficult, from the detailed accounts of operations already performed, to estimate with any accuracy what would have been the result had no operation been performed: some, no doubt, would have speedily fallen victims to their disease; others probably would have lingered on for many months or years in more or less suffering and discomfort; whilst others, again, might perhaps have lived the ordinary term of human existence but slightly inconvenienced by their disease, or might have been fortunate enough to experience a permanent cure under the efforts of nature, or well-directed medical skill. It is therefore much to be regretted that surgeons have not given more explicit accounts of the general conditions of their patients previously to operating, with some surmise as to the probable course of events had no such proceedings been instituted. The value of the operation must be greatly enhanced, both to the operator and the sufferer, when it is felt to have directly snatched the sufferer from the jaws of death, and placed her in a position of health and comfort.

Another point requires to be considered in estimating the value of the ovarian operation; and to this little attention appears as yet to have been drawn. In what proportion of cases

will the cure held good? This is a question of very serious importance; as it appears to me at least. In some few cases the tumors removed have been described as presenting very marked appearances of malignant disease; and it is hardly to be supposed that the removal of the local affection should afford any greater immunity in these than in other cases against the establishment of a similar form of disease in other parts of the system. Dr. Ramsbotham must surely have committed a mere error of expression when, in his valuable "Lectures on the Diseases of Women and Children," he states:—"This appears an operation by no means to be undertaken indiscriminately, *especially as the disease is not of a malignant character.*" Unless malignant disease of the ovaries forms an exception to malignant diseases of other parts, I should conceive that the character of malignancy was precisely that which would forbid the propriety of its removal, rather than form an excuse for the more indiscriminate adoption of such measure.

Short, however, of malignant disease, is it quite clear and certain that, one ovary only being removed, the other may not take on the same form of diseased action, whether consisting in solid depositions or the formation of fluid cysts, or, indeed, in some of the solid forms of tumors, that other and distant parts may not become the seat of similar diseased processes? This question can only be answered at present by mere suggestion, or reasoning from analogy. The ovarian operation has only very recently been performed in a sufficient number of instances to afford the more positive data of facts in answer to this question, and for these facts we have yet to wait. In the interim, it may not be amiss to stimulate the profession carefully to watch those cases in which the operation has been successfully performed; and to regard this important consideration as some check against a too indiscriminate recurrence to this mode of treatment.

In drawing any comparison between the cures obtained by operation with those which are due to other modes of treatment, it must be confessed that the balance will be found greatly in favour of the treatment by the knife; but then, also, it must not be forgotten,

that whilst little or no mischief can be inflicted by careful and judicious medical treatment, the operation has been attended in many instances by great pain and imminent danger, without any advantage being gained,—and in no few even by death itself. The attempt which has been frequently made to compare this operation with that of paracentesis, is evidently unsound; for whilst the object of the former is to remove the disease and restore the patient to health, that of the second is merely palliative, and frequently only had recourse to during the final close of the affection, at the urgent desire of the patient, to obtain some relief to her sufferings, which she has perhaps experienced by the same means at some former period of her disease. It may be, that such relief is bought at the expense of a few days or weeks of lingering and painful existence; but such cannot be regarded as a proper test of the risks of paracentesis.

It may be right, so far as the present statistics of the operation will afford the means, to inquire into the comparative merits of the different modes of operating. A comparison of the success of different operators would be invidious, and into that subject it is neither my wish or province to enter; nor, indeed, are the statistical returns sufficiently extensive upon which to found any very accurate conclusions. In studying this subject, the operating surgeon will do well studiously to look into the motives and results of the plans advocated by his cotemporaries, rather than to encourage himself to regard his own peculiar method as the one which presents all advantages over those of others. It may on inquiry, perhaps, be found that each plan possesses its peculiar advantages, and that the ultimate success of the operation, in the main, will depend upon the appropriate application of different methods to different cases and circumstances.

The table which is here presented to the reader has been divided, as nearly as I could collect, into two great divisions as regards the mode of operating; the one may be designated the major, the other the minor, operation. Such division being founded not on the mere extent of the incision—a matter, however, which cannot be regarded as one of trivial consequence—but upon the

fact, that, in the major operation, the incision is made sufficiently large to allow of the introduction of the hand into the abdominal cavity, for the purpose of placing the ligatures round the pedicle of the tumor or cyst *in situ*; whilst, in the minor operation, the hand is not introduced within the peritoneal cavity, and the cyst, previously emptied of its contents, is drawn out and tied externally to the abdominal walls.

It would appear, then, from the Tables, that the major operation has been attempted in 63 instances, and has been attended by perfect success in 31; whilst the operation has not been completed in consequence of adhesions, the absence of any tumor, mistaken diagnosis as to its real character, or other causes, in 18 cases. The major operation has been followed by the death of the patient in 21 cases.

The minor operation is only applicable, of course, to those cases in which the ovarian tumor is entirely or mainly fluid, and more especially when that fluid is contained in but one cyst, and that of a thin character. For the introduction of this mode of operating the profession is indebted to the ingenuity of Mr. Jeaffreson, of Framlingham; and however future experience and observation may affect the relative propriety of this mode of operating, it would be unbecoming in me to omit this opportunity of expressing my own pride and satisfaction in feeling that the public are indebted to the talent and ingenuity of my relative and namesake, in not only discovering, but actually carrying out, this mode of operation.

The minor operation, it appears, has been attempted in 11 instances; with perfect success in 5. The operation was incomplete, in consequence of adhesions or other causes, in 3 instances; and followed by the death of the patient in 3 cases.

So far, then, as a comparison between 63 cases of one operation, and 11 cases of the other, goes, the results are wonderfully uniform, and leave but little choice so far as respects the method to be chosen; but then other circumstances require to be taken into consideration, which, it must be confessed, turn the scale considerably in favour of the major operation: by the term major operation, however, is not

here implied those prodigiously long incisions, which are probably not required for this form of the disease. The comparison has hitherto been instituted between the major operation, as applied to all cases, and the minor to those only which appeared appropriate to this method. Now, so far as we can collect from the table, the major operation has been had recourse to in 10 cases of entirely, or nearly entirely, fluid monolocular tumors, and has proved successful in 9, and only failed, from the extent of adhesions, in one instance; its employment, under such circumstances, having, so far as can be ascertained by the table, in no case been followed by fatal results. And whilst it is probable that, in some of these 9 cases, the minor operation would have proved inefficient to remove the tumor; it is also fair to believe that the major operation would have been effectual in removing the cysts in some cases out of the five in which its removal was abandoned by the other mode of proceeding.

The most important question remains yet to be considered, namely, how far particular circumstances, judging from past experience, affect the propriety of operating. Many of these circumstances have been already casually adverted to; and it is to be expected that future experience (careful attention being drawn to the subject) will tend still further to clear up this most important point. The necessity for carefully weighing the risks of the disease against those of the operation, not as a whole, but in every individual case, have been already strongly insisted upon; and a hope has been expressed that more careful attention to the subject will tend to increase the precision in diagnosis, the hitherto inadequacy of which has led surgeons to attempt that which could not be completed. It may also be hoped, that an anxious desire to improve by the experience of others may lead surgeons, by adapting their mode of operating to the nature of the case, to overcome many of the difficulties which have too often frustrated the successful completion of this very serious undertaking.

Of the successful cases, 37 in number—

I was common abscess of the ovary (?)
16 entirely or chiefly fluid.

14 of a mixed character, more or less fluid, with greater or smaller solid masses.

6 are not sufficiently described.

Of the cases which proved fatal, although the operation was completed, 14 in number—

1 was fluid and monolocular.

10 were of a mixed character, in which a considerable proportion of solid matter, of various character and hardness, existed.

3 not sufficiently described.

Looking, therefore, at the successful cases alone, there would not appear to be much difference in the choice of cases; but when those cases are also brought into comparison, in which, although completed as regards the removal of the tumors, the operations were followed by a fatal result, there remains a vast preponderance in favour of the selection of the entirely fluid, or almost entirely fluid forms, whether monolocular or multilocular, the advantages of which would probably have been still further heightened had the remaining nine cases been sufficiently described.

Age does not appear to have materially affected the immediate result of the ovarian operation, success and failure having alike been found to attend its performance at all ages. This great difference, however, should not be overlooked, that the advantages derived from a perfectly successful operation in early life are proportionately great as the period of life remaining for their enjoyment. In early life, too, the probabilities are greater in favour of other organs being free from organic disease, excepting, perhaps, in the instance of mixed ovarian tumor of a scrofulous character, or connected with a scrofulous diathesis.

With increased information on the subject, it will be interesting to observe how far previous treatment may influence the result of the ovarian operation. It will be sufficiently evident, that where the operation is recommended or contemplated, the treatment by iodine, mercury, or other powerful constitutional remedies, should not be adopted; or time, at least, should be allowed for their influence upon the system to subside previously to this measure. Friction, electricity, percussion, as recommended by Dr. Ha-

milton, and other local remedies of this kind, should also be avoided under such circumstances, as tending possibly to induce irritation of the solid portions of the tumor and cyst, or positive inflammation of the latter, with peritoneal adhesions. A generally bracing and tonic plan of treatment, so frequently required in all these cases, may be sometimes found, perhaps, to be no useless precursory measure, enabling the system to accomplish the prodigious work of repair which this operation necessarily demands.

Previous tapping has by no means proved a powerful obstacle against the success of the ovarian operation. I suspect, however, for the reasons above stated, when speaking of paracentesis, that the risk of adhesions being formed in consequence of this operation, are far less in the monolocular form of disease, in which the cyst being emptied falls down collapsed into the lower parts of the abdomen and pelvis, than in the multilocular, fluid, or mixed forms of ovarian tumor. It is possible, however, in some instances, that the use of the trocar may be made subservient to the success of the operation for extirpation; where the patient is in too low and exhausted a condition to bear the larger operation, paracentesis may sometimes be rendered available for temporary relief, and afford an opportunity of placing the patient in a condition to take the chance, at a future period, of a permanent cure by the radical removal of the tumor.

With regard, then, to the ovarian operation, I should feel disposed to sum up my own opinions upon the subject to this effect; and in so doing I must beg distinctly to state, that they are opinions only, founded upon my personal observations of the nature of ovarian diseases, and the best statistical records at which I have been able to arrive on the results of operations already performed. It is by no means impossible but that I may have fallen into errors on the subject, and it is more than probable that future observations will materially affect the judgment which I have formed. I have at least endeavoured to obtain such information for the formation of my opinions as was available, and to use that information with candour and impartiality. It is impossible for professional men, without prejudice to their

own reputation, and what is far more important, without detriment to the public good, blindly to rank themselves with the one or the other party; and whatever value may be set upon my own deductions, it will at least be one step gained, if I should have succeeded in a few instances only in substituting conviction from experience for mere prejudice.

1st. It has been sufficiently established, that the extirpation of ovarian tumors is practicable, and that nature is competent to effect the great processes of repair, which so serious an operation demands.

2dly. That as the mortality attendant upon these operations has been shewn to be greatly heightened by taking into consideration the cases in which, from previous errors in diagnosis, the tumors have been found to be other than ovarian; or, being ovarian, from adhesions or other causes could not be removed; increased diligence and attention is required on the part of surgeons to the previous diagnosis.

3dly. That the modes of operating, after-treatment, &c. demand the *careful* and *impartial* consideration of the surgeon, as greatly affecting the possibility of completing the operation, as well as its ultimate result.

4thly. That as whatever future improvements may diminish the risks of the operation, it must ever be considered one of great imminence, it cannot be recommended excepting in those cases in which the bulk of the tumor is productive of much misery and inconvenience; and is already inducing such constitutional disturbance as to threaten some probable limit to the existence of the sufferer.

5thly. That however much assistance he may derive from general rules, the propriety of operating in each case must be decided with a due consideration of the merits and peculiarities of the case in question. A few rash operations must inevitably bring discredit upon the measure, however useful and valuable it may be when conducted with prudence and judgment.

6thly. The fluid forms of tumor are the most appropriate for operation. They are generally the most rapid in their growth, and frequently refill with great rapidity after their evacuation by paracentesis. The risks of adhesion

are less; as also the probabilities of mistake in diagnosis; or of other organs being diseased. Remedies, too, have the least power in the cure of this form of affection. In the monolocular variety, the operation could hardly be recommended, so long as tapping afforded perfect relief, and the fluid was very slow to re-accumulate. The multilocular form of disease is by so much the more appropriate for extirpation, in that tapping is attended with greater risk, and is calculated to afford but a limited degree of relief.

7thly. The mixed forms of tumor are the least appropriate for extirpation; and proportionately so as they contain a greater amount of solid matter. There is a greater risk of adhesions, and also of errors of diagnosis; the opening required for their removal must be large in proportion to the mass of solid. The more solid tumors, if of an inert character, are slower in their growth, and *may* never induce much suffering or risk of life. Their cure is sometimes effected by nature or well-directed medical skill. Their growth sometimes is suddenly arrested, and they continue stationary and comparatively innocuous.

8thly. Somewhat in exception to the last conclusion respecting the more solid but indolent ovarian tumors, it becomes questionable whether their removal may not be sometimes desirable, when their presence has induced ascites. Ascites thus caused can rarely be permanently cured by medical or surgical means, so long as its exciting cause continues in existence; and life will, I believe, rarely be much prolonged under such circumstances. In the 45 cases above related, in which ovarian tumors were removed by the major operation, ascites is actually stated to have complicated 8 cases; in all the ovarian tumors were of the mixed character; and in 6 out of the 8 cases the operations were successful.

9thly. Extirpation cannot with propriety be recommended when the least suspicion exists of the malignant character of the disease; or when it is of strumous origin, and is connected with serofulous disease of other organs, as the absorbent glands, joints, internal viscera, &c.

10thly. In recommending the operation, it may not be amiss to view it as a means of removing an enlarged

growth, which, whether solid or fluid, is producing misery and risk to life, chiefly by its mechanical inconvenience of bulk, or its drain upon the system: hence the surgeon will be alike cautious of operating in those cases in which the local disease, indolent and slow in its growth, produces comparatively little inconvenience and risk; and in another and very opposite condition of things, in which, without his being able to discover precisely the cause, the constitution appears shattered and impaired, in a degree disproportioned to the extent and importance of the local disease. In such cases, there is too great reason to fear that there is more mischief going on in the system than would be removed with the extraction of the ovary. The cases No. 4 and 6, as related above, are to this effect, in which it is hardly reasonable to suppose that the removal of the ovaries, even at an early stage of the disease, would have long retarded their fatal termination.

22, Half-Moon Street,
Sept. 1844.

CONTRIBUTIONS

TO HYGIENE, WITH PARTICULAR REFERENCE TO THE SOLDIER.

MILITARY HYGIENE.

Punishments; their Moral and Physical Effects.

THE object of hygiene is to preserve health and prevent disease; when the health of soldiers is specially concerned, it is termed military hygiene. This branch of military medicine is founded upon a knowledge of the causes which either promote or impair the health and efficiency of troops. Vaidy, in an article entitled "*Hygiène Militaire*," in the *Dictionnaire des Sciences Médicales*, has given a very minute account of the different subjects comprehended under this topic, from which the following heads of chapters have been selected—namely, composition of an army, recruiting, diet—including beverages of different kinds, clothing, cleanliness, equipment, arms, barracks, hospitals, habits of soldiers, military discipline, military punishments, marching, mean ratio of sick, medical officers, sieges, battle, or actual conflict with the enemy, duties of medical officers in the

field, cantonments after a campaign, embarkation of troops, climates—tropical and temperate, discharging of disabled soldiers, asylum for invalids; with an account of the general principles of military statistics and medical topography, and instructions to young medical officers respecting the best mode of executing the various duties which they may be called upon to perform.

The French language is rich in works upon military hygiene; while we have no comprehensive or satisfactory publication upon that subject in the English language. In the present contribution I intend to confine myself to a few desultory observations on punishments; and if I should be so fortunate as to excite others to publish the result of their experience upon some of the various topics included under the head "Military Hygiène," I shall be much gratified.

It is universally admitted, that an army without discipline is nothing better than an armed mob, which is more dangerous to its friends than its foes. To maintain due control in the British army, to check military delinquencies, and enforce obedience, it has been deemed expedient to employ terror-striking punishments of various kinds.

Punishments may be divided into two great heads, namely, corporal or physically afflictive punishments, and mental or ignominious punishments. Corporal punishments had no doubt their origin in a feeling of revenge or retribution; but this barbarism has been greatly mitigated by the benign influence of christianity and the progress of civilization, and pain is now inflicted chiefly as a means of reformation, or as a warning to others not to follow the example of the delinquent. But it may still be asked, are the means usually employed to preserve order in the army, the most humane that might be adopted, not only with safety, but with advantage? Have severe and degrading punishments been effectual in preventing crime? Are not sound policy and humanity not only compatible, but inseparable? When we look at the returns of punishments inflicted, it can hardly be concluded that the means hitherto adopted to promote discipline in the army have been very successful. On an average, about 20 per cent. of the troops serving in the colonies and

foreign dependencies are annually convicted by the sentence of a court martial, and punished. "Habitual drunkenness" constitutes about two-fifths of the whole number of convictions. "Desertion," and "absence without leave," are the most prevalent crimes among troops employed in Great Britain and Ireland. In 1839 no fewer than 2110, being nearly equal to one-fifth of the number of recruits annually raised, were convicted and punished for these two offences.

The frequency of delinquencies in the army has been commonly attributed to the circumstance, that it is recruited from an inferior class of the population; by which means uneducated and low-born persons are admitted into the ranks. How far this surmise is well founded, it is difficult either to prove or to disprove. Considering, however, the unfavourable opinion entertained by the public in regard to the army, the onerous duties and thralldom of soldiers, and the limited remuneration they receive for long and arduous services, I do not think a more prudent and better class of men are likely to become soldiers.

The British army consists of two very distinct classes, namely, officers and soldiers. One class is trained to command, and the other to obey,—obedience being the most essential element in military discipline. Recruits, in general, enlist without consideration, and enter into an indissoluble contract, respecting the nature of which they are for the most part totally ignorant. Most of them enlist from mere thoughtlessness and domestic broils; some from misery or want of the means of sustenance, which may arise from idleness, or from the difficulty of procuring suitable employment; and not a few from temporary inebriety. In the course of time the soldier perceives the barrenness of his situation, and the never-ending nature of his engagement. He frequently sees men, not his superiors in talent or merit, rising to wealth and distinction in the world, while he feels that he is stationary for life, and that his prospects are not likely to mend. He may, and no doubt frequently does, overlook the numbers who fail, from having fallen victims to misfortune and poverty. It need not therefore surprise us, that men constantly suffering under

the irksomeness of military restraint, unrelieved by any variety of amusement, occupation, or encouragement, and conscious that good conduct leads to no adequate reward, should evince impatience at the severity of discipline, and endeavour to liberate themselves by desertion, having no hope of obtaining freedom, within a moderate period, by any other means.

The crimes of soldiers chiefly arise from the constitution of their profession. To disregard the verbal order of a commissioned officer, or even of a non-commissioned officer—a corporal, for example—is insubordination, and renders a man as liable to be tried by a court-martial, and punished, as if he were to commit a breach of the mutiny act or the articles of war. Soldiers are also liable to be punished for constructive offences, such as alleged disrespect to a superior officer. It is difficult, therefore, to escape from the net of military law, its meshes being closed against the exit of the minutest fry of delinquencies. A court-martial may sentence a soldier to suffer corporal punishment, not extending, however, to "life or limb, for immorality, misbehaviour, and neglect of duty." The vague generalities of this article literally annul the benefits of a written code. The Chinese have a similar article in their code of laws. It is as follows: "Whosoever is guilty of *improper conduct*, and such as is contrary to the *spirit of the laws*, though not a breach of any specified article, shall be punished at the least with forty blows." In such cases the will of the judge or court is the law.

Well-educated persons, individuals whose parents belong to a respectable class of society, and who have undergone careful moral training, find the thralldom and usages of the service as irksome, and are as liable to military "misbehaviour," as the uneducated and low-born class of soldiers; perhaps they are, indeed, more liable to fail in respect to their immediate superiors, whose conduct they may consider arrogant or oppressive. Implicit, unquestioning obedience, is an indispensable requisite in every soldier, according to the institutions and customs of the army; and this is perhaps more irksome to well-informed men than to the uneducated.

When so much is left to the arbitrary will of officers, in regard to the delinquencies of soldiers, it will appear that the welfare and happiness, and I may add the efficiency, of a body of troops, will be greatly influenced by the discretion, good sense, humane disposition, and experience, of a commanding officer. Every one admits that the poor ought to be educated; but it is of more importance that the rich—in other words, those in high station—should be well instructed; for if their principles were right, and their practice wisely conducted, the institutions and customs of society would eventually be somewhat purified and improved. The doctrine of expediency, and the plea of custom, regulate weak minds; and however well-intentioned routine commanding officers may be, they are liable greatly to abuse the power with which they are invested.

It has been asked by an apologist for corporal punishment, as there is no encouragement, or next to no encouragement, for good conduct in the army, how can you abolish (flogging) the punishment necessary for repressing bad conduct? But it may be asked in return, is flogging calculated to render an "ill paid and ill rewarded" soldier well conducted and obedient? Will punishment induce him to like the army, and to prefer it to the condition of civil life? And does not sound policy, as well as honesty and humanity, forbid us to punish delinquents until we have tried the requisite practical means to prevent the commission of crimes? and, I may add, unless that punishment promises to be beneficial?

Experience seems to prove, that crime is more effectually prevented in civil life by the diffusion of information, good moral training, kind treatment, and an easier mode of gaining a livelihood, than by the most severe punishments. May we not therefore presume, that offences may be prevented in the army much more effectually, by raising the character of soldiers, and by meliorating their condition—by making them, in fact, prefer the public service to the situation of labourers, or artisans in civil life—than by either corporal or mental punishments? By examining the circumstances attending individual instances, which, like a mirror, reflect

the deformity of corporal inflictions, we shall find that severe and ignominious punishments neither reform delinquents, nor operate beneficially as exemplary penalties.

Among the numerous and important subjects connected with the punishment of military offences, the nature of the punishments themselves demands attention. Capital punishment has hitherto been considered a necessary and unavoidable evil, which, with all its dreadful preparations, and the terrible ceremony of the execution itself, is retained less for the punishment of the criminal, than as a warning to others not to follow his example. But whether we have a right to torture, and finally put to death a criminal, in order to deter others from repeating his offence, may be doubted. It has been often observed, that extremely severe sentences, such as capital punishments, defeat their own object; they certainly fail to prevent desertion.

During the American war of 1813, desertions from our army to the United States were frequent; and to prevent this, men who were caught in attempting to cross the boundary line were executed: six were shot in one day, but without any beneficial effect. In order to show with what indifference individuals met death, and by inference how little influence this punishment had in preventing crime, the particular circumstances which attended the execution of one man may be stated. "A private," says Colonel Campbell, then Brigade Major of De Meuron's regiment, "was to be executed. The troops were formed in three sides of a square; at the other side, towards the forest, the grave was dug, and the coffin for the criminal to kneel upon was placed, as usual upon such occasions, beside it. The provost, with the firing party, escorting the prisoner, and with the band of the regiment at their head, playing the Dead March, entered the square,—when, to my surprise, there proudly marched the prisoner, coolly smoking a cigar. Seeing the bad effects likely to result from such evident contempt of death, painful as it was to me, I called the provost, and ordered him to take away the cigar from him. On approaching the grave, the prisoner walked quietly but steadily forward, looked

into it, and turning round to me, said in French, 'It will do.' He then walked up to his coffin; and before I was aware of what he was about, with his middle finger and thumb he measured its length, and turning round to me, he said in French, which his corps generally spoke, 'It will do also.' He refused to permit his eyes to be covered, pushing the provost aside, and exclaiming in French, 'I am a brave soldier, and have often looked death in the face, and shall not shrink from it now.' The provost made signs to him to kneel upon his coffin, but he replied, 'I prefer standing, and shall do so firmly.' The party fired, and in an instant he ceased to exist."—(*A British Army as it was, &c. by Lieutenant Colonel James Campbell*, p. 95.)

This mode of executing the sentence is liable to some serious objections, more especially on account of the circumstance that a prisoner may be pierced with a number of balls without ceasing to live. When Placido, the chief conspirator of an insurrection in the island of Cuba, was executed, five balls entered his body. Amid the murmurs of the horror-struck spectators, he rose from the bench upon which he was sitting, and turned his head towards the soldiers, his face wearing an expression of super-human courage, "Will no one have pity on me?" he said. "Here (pointing to his heart), fire here." At that instant two balls pierced his breast, and he fell dead. Nineteen insurgents were shot at the same time with Placido.

In illustration of the strictness of military law and military usages, when compared with the laws which regulate civil society, I have subjoined an account of the execution of a very remarkable man.

Private Flanagan, — regiment, was a fine looking soldier, about six feet one inch in height. He had excellent natural talents, and had received a tolerably good education. He had acquired a knowledge of Latin, and could speak the French language. When the regiment went to India, he was in a short time able to communicate with the natives in several of the languages of the country. Although Flanagan was a smart clever soldier, he was liable to commit slight breaches of military discipline, and his name

was consequently sometimes entered in the defaulter books. Being a man of high spirit and violent temper, he could ill bear the reproaches of the adjutant, who repeatedly censured him for his irregularities. On one occasion he became so irritated with the rebuke he was receiving, that he impatiently pushed the adjutant from him with the back of his arm. Flanagan was forthwith tried by a court martial for offering violence to the adjutant, and sentenced to suffer death. When the sentence was communicated to him, he simply observed that he thought the award of the court was severe. On the day of the execution he preserved the most remarkable firmness, and conducted himself with the strictest decorum. The square having been formed, he, by permission, addressed the company to which he belonged. Having reached the fatal spot, the fort-adjutant commenced to read the proceedings of the court martial; but having lost self-possession, his tongue faltered, which being observed by Flanagan, he addressed him by saying, "I see, sir, that you are agitated; pray allow me to read the proceedings for you." No notice was, of course, taken of this offer. He then begged that he should not be blindfolded, and that he might be permitted to give the word of command to the execution party; both of which requests were granted. He finally gave the word of command, with as firm a voice as a serjeant-major is accustomed to do on a drill parade.

Flanagan's untimely fate took place in June 1828, at Trichinopoly—he having, in all probability, fallen a victim to the unwise, injudicious, and harassing treatment of a superior officer. How far it was beneficial to carry the capital punishment into effect in this case, it is not for me to give an opinion. The crime appears to have been the result of momentary passion or irritation, not a consequence of design; and perhaps he was hardly sensible of the breach of discipline he committed in the act for which he suffered death.

Another example, which occurred lately, on a foreign station, may be given for a similar purpose, namely, to illustrate the rigour and practice of military law. Private H—, belong-

ing to the — regiment, was brought before the captain of his company for having been drunk, and ordered the trifling punishment of two or three days' drill, when he gently struck this officer's shoulder, exclaiming at the same time, "There now is death for me." The man in question was of highly respectable extraction, and a graduate of one of the English Universities. He drew up what he intended as a defence, but was dissuaded from the avowal of the sentiments and disclosures it contained, by some benevolent persons, who thought it might operate against him. The purport of what he intended to express was this: that he had been suspected of writing a letter in a newspaper, respecting the state of the regiment, some two or three years ago, and that he had ever since undergone such unremitting persecution, as rendered life intolerable, and he therefore, by the commission of this crime, hoped for death, as a termination to his sufferings. He did not name any one as his persecutor, but intended merely to remind the court, that rational beings were not in the habit of acting as he and others had done, without some cause. This man was sentenced to *eight years' imprisonment* with hard labour, and a month's solitary confinement every four months.

Had private H— committed suicide, instead of making a shew of striking his captain for the purpose of being put to death, a coroner's inquest would, I think, have returned a verdict of *temporary insanity*. It is notorious that this man sought death as a release from continued suffering. The mind becomes unsettled from mental anguish; and whether we call that state of the intellect insanity or not, the actions are often not regulated by reasonable motives. The existence of moral insanity, without any obvious intellectual derangement, can scarcely be doubted. How many murders have occurred in India, from apparently very unimportant causes, such as the excitement occasioned by the annoyance of soldiers being kept longer at drill than they deemed just or necessary, or employed at fatigue duty under a tropical sun.

Capital punishments must be either *retributive* or *exemplary*. How inadequate are our means of ascertaining the degree of moral guilt, in most cases,

so as to enable us to award a due retributive punishment in physical or mental suffering! "To acquire a complete knowledge of the guilt attached to an individual for an act of delinquency, it would be necessary to find out the secret springs that had led to the commission of each particular act—how much of the motive arose from the force of circumstances, acting momentarily on the mind, how much from a hardened disposition, and how much from mere weakness and mental imbecility." The vagaries of incipient and temporary insanity are easily mistaken for the outbreaks of reasoning insubordination; and after an offence has been committed, it is often impossible to obtain the requisite knowledge of the responsibility or of the motives of a delinquent, so as strictly to apportion punishment to guilt.

Exemplary punishments are perhaps not less difficult to award. To punish one man, for the purpose of deterring some other unknown person from the commission of crime, can scarcely be defended upon the common principles of justice, even if it were demonstrated that exemplary punishments are beneficial. But how rarely is it obvious that punishments inflicted for example's sake have possessed much of the deterring principle.

Flogging has been long the principal secondary punishment in the British army. In the early part of the last century, it was inflicted by means of rods, and by hired executioners; but that mode having fallen into disuse, the present system was adopted, namely, by drummer with the cat-of-nine-tails. During the rebellion in Scotland in 1745, the cat was much employed by the army, to extort evidence, as well as to punish soldiers. We learn by the Jacobite memoirs, that a sentry, who had been convicted of allowing a prisoner to escape, received 500 lashes with it.

The punishment of flogging has been employed and defended, apparently as if it were calculated to expiate or atone for crimes. Flagellation was no doubt approved by public opinion, so long as it was in accordance with the prevalent religious ideas. The church pointed out corporal inflictions as a means of salvation; and the repentant sinner believed, that by penance and

bodily suffering, he should recover peace of conscience.

Corporal inflictions were not then disgraceful, they being considered to possess an expiatory character. But this belief in the efficacy of flagellation and severe fasts has long disappeared. Public opinion in our day brands the punished criminal with an almost indelible disgrace; and perhaps the degrading character of corporal punishment is more sensibly felt in the army than in civil life, owing to the circumstance that it is exclusively inflicted upon private soldiers. Even those who defend the suitableness of flogging as a punishment, practically admit the degrading character of the infliction, by refusing to take a whipped offender into the public service: he is also liable to be refused employment in civil life. By this means, Prince Oscar inquires, "Is there not thus formed a class of *Pariahs*, or moral outlaws, who are obliged to consider themselves as being in a continued state of warfare with society?"

For a long time the cat-of-nine-tails has not been used in the British army except by the sentence of a court martial, and in the presence of a medical officer. At what particular date the formality of a court martial became essentially necessary, I have not learned. In a general order, which was issued in Canada on the 14th of November, 1759, it was announced that "any soldier that is found drunk will receive twenty lashes per day, until he owns where he got the liquor; and his allowance of rum will be stopped for six weeks."—(*Historical Journal of the Campaign in North America, by Captain Knor*, vol. ii. p. 205.)

No court martial seems to have been required, in carrying the above punishment into effect; and it is obvious that the cat was to be used as an instrument of torture, with the view of extracting evidence. Until 1836, there was no limitation to the extent of the sentence of a general court martial; "bounds were not set to show the maximum of punishment;" every thing, in this respect, was left to the discretion of the court. The following is the largest amount of punishment which I have known inflicted upon a man, for one and the same crime.

In 1813 or 1814, when a wing of the Bengal European regiment was stationed

in the island of Amboyna, three men belonging to the corps were tried by a court martial for marauding and ill-treating the natives. Each of the three men was sentenced to receive fifteen hundred lashes. A punishment parade being formed, and immediately after the reading of the sentence, one of the prisoners sprung forward, seized the drum-major's sword, and called upon the men in the ranks to come forward in his favour,—a request to which they did not respond. He was forthwith secured; and having been lashed to the triangles, he received the whole amount of his sentence, fifteen hundred lashes, well applied. The other two prisoners received each the same number, equally well inflicted. In the framing of laws rigor is necessary, but in executing them mercy is essentially required. The converse appears to have obtained in the above cases, the punishment having been more severe than was warranted by either former usage or express regulation.

The prisoner who was first punished was subsequently tried for his mutinous conduct in the square of the corps, and having been condemned to death, the sentence was inflicted by his being shot with musketry.

[To be continued.]

ACESIUS:

A SURVEY OF THE ETHICAL BEARINGS OF
MEDICINE.

By C. F. H. MARX, M.D. &c.

(For the *London Medical Gazette*.)

[Continued from p. 89.]

TO JAMES GREGORY.—

You never regretted the vast pains you took in Aberdeen, and Oxford, and Edinburgh, upon your classical education;—the root of all sustained effort is bitter, but the fruit is sweet.

That only which is perfect in its form and kind pleases the judicious, and outlives the times in which it was produced. Your elegant Latin has contributed not a little to your fame; and now, when your name is mentioned, you are commonly instanced as a model both of style and of matter.

Speech, it has been aptly said, is the man; and as a noble presence generally indicates a noble nature, so does an elegant style for the most part imply, that thought and study have been expended in equal measure on the matter.

But as in your day the medical author who could write with some little elegance, and make himself interesting to non-professional as well as professional persons, was one of the rarities—one of the white ravens or black swans—so it is at the present time. And it is even this state of things that leads me to pour out my complaint before you, with a faint hope that I may receive some comfort at your hands.

On the temple of the Delphic Apollo, as you are aware, stood the motto in golden letters: KNOW THYSELF,—as a kind of admonition to the approaching votary, that the Pythia dwelt within himself, in each man's own interior. The habit of questioning our proper genius, however, is becoming rarer and rarer: man appeals too little to himself; and our youth, by the distraction and multiplicity of their studies, seem scarcely ever to arrive at self-interrogation. The demands we make for knowledge are too manifold and too many; those for the mastery of what is known, and the right interpretation of what science imparts, are too few: a certain quantity of knowledge is required,—its quality is less thought of, indeed is apt to escape consideration altogether. The state machine, meantime, proceeds very regularly: the school and academy turn out ripe youths, approved by examination, and the university by and by hatches them into doctors; but they are still, and ever remain, mere tyros.

Every one runs after his object, and each is at length glad to be rid of competitors in the race. And then, by the pressure of the masses, it is becoming ever more difficult to give anything like special and sustained attention to any single subject: population increases; augmented facilities of communication bring the most distant boundaries of empires—the most distant empires, into contact; one discovery pushes aside another; and our steam presses, like ever active volcanoes, belch forth and scatter excitement on every hand.

He who is kept constantly in harness has enough to do with himself; care for his own existence suffers him to make no sacrifice for another.

In life this may be admitted; but whether it be well in science, and particularly in medical science, that is another question.

Much to be said, practitioners of medi-

cine, who above all men has to do with individuals, fix the whole power of his intellect and spirit upon the individual?

The problem entrusted to him both mentally and morally for solution or development appears to be this: not merely to recognize the tranquil spirit in the circle of eternal change, but to remain tranquil himself; and after having made the round once, to set himself to wrestle with details.

Even in the same measure as medicine expands—infinity, it may be said; as travels into new countries make us acquainted with additional articles of the *materia medica*; as chemistry from her furnace and alembic presents us with novel combinations influencing the bodily state; and as the microscope goes on enlarging more and more the smallest objects to the eager eyes of physiology and pathology,—in the same measure, I conceive, ought the true physician to strive after concentration and completeness in individual details.

Our schools have yet to make a beginning in this direction: the ideal in performance can only proceed from satisfaction with our daily occupation, from the longing gratified of simultaneous progress made in the real and the formal.

Who can bear witness better than you to the necessity and the reward of private industry, of occupation with the masters of our art, and the business of displaying the rightly apprehended in clear and simple terms?

The Dutch Hippocrates, who certainly cannot be reproached with the one-sidedness that is apt to attach to formal training, was in great measure self-taught*; his teachers were principally the ancients; and the singular amount of influence he obtained on contemporaries and posterity, he acquired mainly through the weight of a high and universal cultivation. When students, therefore, call out *panem et Circenses*—that the indispensable only be presented to them in their study-courses, and every thing be made easy as child's-play, the zealous teacher gains no dispensation in his labour.

* In the *Commentariolus de Vite cursu, propria Boerhaavii manu conscriptus* (vide Buntou's *Life of Boerhaave*, p. 207), we read as follows: "Est forsitan incredibile nullum de Nostro medicinæ cultum professore nisi vel. Breveintum vel. vicibus paulo ante fata."

It is not to be apprehended that the study of medicine will ever become a *torus medicatus*, a Graham's celestial bed; but it is certainly sought to be made attractive by books with the character of chrestomathias or school-collections: it has now its alphabetical cyclopædias, and treatises on anatomy and physiology, *materia medica* and surgery, that are ornamented with prints, like primers and A B C books for little children. Of all the components of the head, the eye alone is taken into consideration; where there is a picture there is no need of a thought.

At no time has the peripheral organ, the superficial, been so diligently laboured as at present. But when the external is treated of, when mere skin and covering are the subject, we are reminded of the ancient Myths, and recollect that, in the Argonautic expedition, miracles lent their aid; that the mast of the good ship Argo gave the bold adventurers a word of prophecy in season, and that Hercules lost his life by Dejanira's poisoned shirt.

True learning is becoming every day a greater and greater rarity in the medical man*; but as learning is still held to confer a title to consideration, so do we frequently encounter sham-learning—a certain mock familiarity with Hippocrates and Galen, and an ostentatious use of phrases picked up blindfold, and cast about at random†.

The study of grammar occasions so much misery at school, as you know, that the emancipated student seeks to be rid even of the recollection of his annoyances; and so it comes that errors, both in writing and in speaking the Latin language, soon obtrude themselves. Exceptions, it is true, occur occasionally among the members of our profession; but exceptions are still held proofs of the general rule. The learning of the dead languages is looked upon as an indispensable part of elementary education; and with our increased facilities for travel and intercourse, a knowledge of one or more of the living tongues of Europe is held a

necessary accomplishment. Many a one, however, who has the French and the German key at hand, has no familiarity with the *clavis Ciceroniana*, and many strange blunders are in consequence committed. The classics—I mean the books—are constantly taken from the gymnasium or academy to the university, and with the purpose of keeping them, like prize medals, to the last. In the hour of need the cry is: *surgite Triarii!* and, in the struggle, they find their way to the old-book-stall.

But even as little as high personal beauty is incompatible with courage, as little does a classical education stand in the way of practical accomplishment. Who, better than yourself, could satisfy us that those physicians on whose *index prohibitum* the classics had no place, have been those precisely who have been most distinguished by penetration of judgment and rectitude of conduct? It is but lately since I discovered that George Baker, the benefactor of Devonshire, the tracer of the cholic and paralysis, endemic there, to the presence of lead in the universal beverage of the county, cyder, and that derived from the use of leaden vessels, was an admirable Latinist.

Many medical writers exhibit what may be called a remarkable innocence in literature. They quote an author, for instance, without farther observation, and after the edition of him which they have at hand; they know Fontanelle, but not Fontenelle; they know no Hunter but one, nor any Monro but one; when Hamann is cited, they think of none other save him who was hanged: and on mention of Lichtenberg, they straightway conclude that the hermit of that name, whose interpretation of the pentagramma and other magical figures finds a place among the collected writings of Paracelsus, is the party intended.

The plastic arts, on the other hand, are commonly enough not regarded; there be medical men who know more of painters' schools than of painters' choice. And he who has no collection of medical portraits, still very probably possesses a fine engraving or two of some medical subject, such as L'Amour Médecin, or the Water-doctor of Gerrard Dow.

It were unfair to ask for too much

* S. C. Lucæ speaks briefly and well on this point in his oration: *Cur nostris temporibus multo parcius quam olim inter medicos juniores repantiur docti literisque satis imbuti?* Marburgi, 1820.

† The connoisseur exclaims with Aristophanes (*Nubes*, v. 960), at sight of the pretender: *Laugh! there comes a student again! The spit-box, quick!*

in such things. The artist has antiques, where much is wanting, for his studies; the physician has sick men, who lack much for his. Other casts than plaster casts of tumors and deformities might lead his fancy off in a wrong direction. The every-day practitioner must be familiar with the membranes—of the body—of every kind and description: whether or no he have ever seen and handled any other membrane of the kind discovered by Eumenes of Pergamus (parchment), than that on which his doctor's diploma is written, signifies not; his business is to order not Attic but Epson salt.

He who is fatigued with the toils of the day, at the present time, scarcely expects to find himself, like Arbutnot, seated in the company of a Swift and a Pope, descending on the fine arts, or drawing a portrait of Martinus Scriblerus;—but a novel from the circulating library is still held tolerable company; at all events it is not despised. It were, however, subject worthy of inquiry, whether the very greatest characters have not occasionally been beholden to such reading for their noblest conceptions.

Indulgence in the poetical faculty appears not to accord well with the multiplicity of detail in empirical science. Nietzsche, in his pathology, places the *furor poeticus* betwixt the *chorea sancti Viti* and the *furor uterinus*! How shall we wonder, then, that even the ancient physicians, whilst they willingly chewed Alexandrian raisins, which were without stones, so generally eschewed Alexandrine verses.

There have, indeed, been physicians who have been rather famous poets, such as Nicander of Colophon, Serenus Sammonicus, Aegedius Cabriolensis, Hieronymus Praecastorius*, Geo. Gottlob Richter, Albert Haller, Werlhof, Mark Akenside, and John Armstrong, and others who have interested themselves much for poets, as Garth, who, besides writing poetry himself, buried Dryden decently, and Currie who edited the works of Robert Burns—and Edward Jenner, too, let it not be forgotten, wrote verses. But with the best will in the world the Gradus ad Parnassum does not actually lead to

Parnassus: and though a lame Tyrtæus might inflame the Spartans, no practitioner of medicine will ever cure a cripple with his poetry.

Leaving poetry out of the question, then, not looking for any degree of skill in the art of "building the lofty rhyme" from the medical profession, I may still be allowed to complain that so many of its members write so carelessly; they might be sharply handled on the deficiencies of their prose style; and indeed impatience and spite almost tempt one at times to take it out of their skins,—Apollo stripped Maryas of his entirely for his indifferent writing,—were it not that as anatomists we know we should have to make somewhat severe inroads in the process upon the cutaneous nerves.

He who has even the most perfect processus styloideus in his skull, may, as you are well aware, have the most defective style of writing imaginable; there have not been wanting instances of such gentlemen, who, on this very ground, have given themselves out as genuine practical men. But against such pretensions I feel called upon to protest with the authority both of sacred and profane writers. The Gospel according to St. Luke is written in better Greek* than any of the other gospels; but the apostle was a physician. Such men as Celsus, Fernelius, Sydenham, Baglivi, Gaubius, Triller, William Hunter, and Cuvier, who took such pains with their language, can never be reached by the charge that they were word splitters and mere verbal critics.

Even as the cream shows the goodness of the milk, so do precision and elegance of expression indicate the parts of the writer. For style there is indeed no general rule or standard; it seems to vary with the prevailing spirit of the times, and differs as the period is one of tranquillity and indifference, or as it is marked by mental excitement and bustle; it is now argument and sequence, now daring and assumption, that takes the lead; at one time it is wit, at another it is seriousness that prevails; with leisure, men write at length, and are prosy; apt to become pressed for time, they are concise and

* Du Val (*Pictura linearis Sanctorum medicorum*, p. 4. Paris, 1613), says of him: *Divus Lucas scripsit Evangelium ornatissimo sermone, stylogue elegantiori, in gratiam Græcorum qui sermone venustate ac politiore literatura delectabantur.*

* The Bartholinus, in his *De Medicis Poetis* (p. 152, Hafnia, 1669), says of him: *Cum Veterum majestati certare valet.*

pointed. The elegant and the harmonious, however, are always in season.

And there let us admit the fact:—the wooden tablets covered with wax upon which the ancients were wont to write, have become, through Gutenberg's means, the tables of the law for mankind. In the brain there is a pen—a writing pen*, in sooth (*calamus scriptorius*); and the pen is now the prime feather in the wing that moves the world. And writing is wonderfully facilitated now in comparison with what it was formerly; and if not yet altogether free from danger, it is gradually becoming more and more so. By means of the pen machine, moreover, we have now a pen ready at a single snip, and with the steel pen we have nothing to fear from chips flying off into the eye in nibbing. And then we have glazed paper, which if it does not in any way spare the head, still saves the hand much inconvenience. Medical men, too, are now at liberty to spend all the more time on their periods, seeing that periodical distempers are cut short and cured with quinine.

Under these favourable circumstances I have a plan nearly ready—always with the proviso that you consent to accept the President's chair—for the foundation of a medical society for the cultivation of style. The society will of course, like other societies, propose prize questions from time to time, for which ample funds it is not doubted will accrue from the superfluous fees of physicians and surgeons during the first five (in London, ten) years of their lives as practitioners.

If you approve of the idea, perhaps you will be kind enough to select those you most approve of from among the following questions, and to fix a day for the inauguration of the society.

1. On the power to dispense with technical terms: a sermon.

2. On the untruths to patients that are admissible: a tale.

3. On the merit of unravelling tangled skeins: an ode.

4. On disputes and differences among medical men after the demise of the patient: a catechetical essay.

5. On the mutual confidence of medical practitioners: a dream.

6. On the agreements during and after consultations: table-talk.

7. On the friendships of medical men: a myth.

8. On the propagation of half true truths and untruths, and on innuendos: a medico-political enquiry.

9. On the acting—tragedy, comedy, and farce—of patients: a hymn.

10. On the physiognomy to be observed in presence of the patient: a sketch from nature.

11. On the selfishness of the sick: a satire.

12. On the cynicism of the medical practitioner: an elegy.

13. On undecieving medical men: a narrative.

14. On the complaints of practitioners at having no Sunday: a farce.

15. On the unexpected *rencontre* of two practitioners at the bed-side of the same patient: a physiological interlude.

16. On the struggle to become the family physician: an heroic poem.

17. On the mutual reconnoitings of colleagues: a novel.

18. On the dilemma of having neither sick nor sound to wait on: a popular ballad.

ANALYSES AND —ICES OF BOOKS.

“L'auteur se tue à allonger ce que le lecteur se tue à abrégé.”—D'ALEMBERT.

Introductory Address to the Students of University College, at the opening of the Winter Session in the Faculty of Medicine, 1844-45; containing Observations upon the effects likely to be produced by the Medical Reform Bill and the New Charter on the Surgical Profession and the Schools; Remarks on the expediency of combining Literary with Professional Pursuits; and Directions for the most advantageous Method of Studying Medicine and Surgery. By SAMUEL COOPER, Professor of Surgery in the same College, &c. Longman and Co.

EVERY thing from the pen of the author of “The Dictionary of Practical Surgery” is precious in our eyes. The compiler of such a work must needs be held a benefactor of mankind: he puts the best information on a subject of the highest importance to every man, within reach of all who have acquired the

* See my essay: *De Hierophilii celeberrimi medici vita, scriptis atque in Medicina meritis.* 4to. Götting. 1840, pp. 29, 30.

radiments of medical science; he presents his age with an epitome of the opinions and experience of all the mightiest spirits that have lived and expended themselves in that department of the healing art which requires manual interference.

Probably no single book that was ever written or compiled has exerted a more beneficial influence in its sphere than Mr. Cooper's Surgical Dictionary. Others have had medals struck, and pictures painted in their honour: our estimate of Samuel Cooper's deserts would not allow us to stop short of any proposition for less than a statue to him.

We should have felt it a duty, then, to notice any introductory discourse which the Professor of Surgery in University College saw fit to commit to the press; the time at which, and the circumstances under which, the present address is produced, made us even eager to peruse it; the table of contents on the title-page, it may be imagined, did not tend to lessen this natural desire.

Mr. Cooper commences his address by vindicating the 1st of October as the fittest season for entering on the business of the medical session. London stands almost, if not altogether, alone in this respect, however: and we are satisfied that the 1st of November, as in Scotland, and all over Germany, is the proper period. The courses delivered on the Continent are certainly not less complete than they are in London; yet the professors there find from the 1st of November to the 30th of April as good a six months as our London professors do the five months, or five months and a half, from the 1st of October to the middle or end of March.

"This session or term," says Mr. Cooper, "is remarkable as beginning at one of the most eventful periods ever known in the British medical world, over which the god Apollo, who of late may have been caught nodding, seems unlikely to retain much longer his usual influence, but must yield to the irresistible spirit of the times, and bend to the power of parliamentary enactments and royal charters." We are sorry to fancy that Apollo is to be discarded; Sir James Graham, we presume, has unseated him; but if he has been caught nodding, as Mr. Cooper insinuates, we have nothing to say in arrest of the judgment that awards his depo-

sition. Mr. Cooper then goes on to apologise for the introduction of medical politics, but thinks he will be excused for not passing them over altogether in silence. As the Medical Reform Bill is intended to govern the whole profession, its practitioners, its students, its several colleges, and its schools, he imagines it no wonder that some clauses and omissions in the bill should excite considerable discontent. The intended bill, however, he conceives, has "some wise enactments, which ought to save it from absolute and total condemnation."

"Some doubts," he proceeds, "I know, are entertained about the expediency of instituting a 'Council of Health and Medical Education;' and many sensible persons would prefer leaving the profession, as much as possible, to its own self-government, under which it is certain that medical science has attained in this country a degree of perfection not surpassed, probably not reached, in any other. In every attempt at innovation, this last fact must not be overlooked—it bears upon almost every question of medical reform; and, at all events, it dictates to the legislature the utmost caution in all its measures of interference with the profession. Whether the Council of Health and Medical Education, if it were established, would fulfil its intended high functions well and efficiently, would, of course, very materially depend on the talents, judgment, and the discretion, of the persons favoured with seats in it. If it were well constituted, I should expect that the profession and the public would be served by it in some respects, though not perhaps in every thing desired. By connecting the profession with the government, our notorious political weakness, as a body, would probably have a chance of being more or less obviated. To such an Institution we might look for more uniformity, more stability, and more consistency in the future regulations for medical schools, than has hitherto been manifested in the multiplicity of codes sent forth from time to time by an extraordinary number of councils and examining boards, without any harmonious co-operation—some modestly laying down the minimum as the fit principle for the curriculum; others, more bold, taking praise to

themselves for insisting on the maximum.

"The establishment of one supreme council for this most important duty, I should hope, would lead not only to the diminution, if not the discontinuance, of a petty, meddling, restless, and ever-changing system of legislation on professional education, but to the exercise of more wisdom in the recognition of hospitals and schools, than has been displayed of late years by collegiate and other authorities. If this superintending council were properly formed, I should entertain no fear myself of its adopting any measures likely to destroy the competition amongst the schools—an apprehension seriously expressed by one public writer of talent. In the endeavour to bring about some uniformity in these schools, it might direct the same subjects to be taught at all of them; it might even go so far as to order the same fees to be paid at all for them: but it would be entirely beyond its strength to cause medicine and surgery to be taught in all places with equal talent, efficiency, and success. In truth, the competition relates, not to the subjects to be taught, but to the manner of teaching them; and whatever this council may do, the schools will still laudably strive to emulate and excel one another in the value of the instruction delivered at them; because use on this must always mainly depend their own reputation and prosperity. Were the fees equalized in all the recognised schools, metropolitan and provincial, I imagine the fair and honourable competition, now referred to, would not be checked even by this absurd interference; but rather experience a fresh impulse, arising from the decline of small teaching establishments, which now live (if I may so express myself) principally upon their cheapness."

We are pleased to have the views of such a man as Mr. Cooper on this momentous subject. We have the pleasure of agreeing with him in all that he has said. We would only abate the word "absurd" in connection with the interference: interference was highly necessary, and the Council of Health and Education, *properly constituted*, it strikes us, as we have already had occasion to say, in securing uniformity of study and uniformity of fee in each country, will conduce immensely to the

efficiency of the educational establishments of each. Teachers at present cannot—dare not—insist on the attendance of their students; under the general regulations insisted on by the Council of Education they would have no difficulty in securing the presence of every young man who entered on every day throughout the session. And to the mass of common minds that engage in every study, in that of medicine among the rest, though the most extensive and difficult of all, the necessity of being in the way to acquire information is always of great importance. The better intellects are independent of teachers, but they are few; the poorer orders of minds are every way dependent on their instructors, and it is really of moment that they be compelled to take advantage of the opportunities that are afforded them: the community is even interested in their studies to this extent.

"As for some other parts of the Reform Bill," continues Mr. Cooper, "they seem to me fully to merit all the opposition with which they are threatened. The imposition of a tolerably heavy poll tax for registration; the still heavier payments to be made when a practitioner removes from the jurisdiction of one of the national medical colleges to that of another, an enactment directly at variance with the long-desired equal validity of their diplomas in every part of Her Majesty's dominions; and lastly, the omission of an efficient clause to protect the regular practitioner, *i. e.* to prevent unexamined persons from practising and assuming the title of surgeon; are, according to my view, amongst the most objectionable features of the Bill as it now stands. Indeed, if it had not some other clauses of fairer promise, I should have been disposed to suspect, that those philosophers, who concocted it, had considered us in their experiments (as Burke would have said) 'no more than as mice in an air-pump, or in a recipient of mephitic gas.'"

This is quite unequivocal, and Mr. Cooper's words are but the echo of the voice of the entire profession.

Quitting "The Bill," Mr. Cooper approaches another knotty point—"The Charter recently granted by Her Majesty to the Royal College of Surgeons of England, which will be scarcely less important in its effects

upon the surgical community of this kingdom. Practitioners and students in surgery generally—every medical school, and every teacher—all who are, or intend to become, either regular surgeons or general practitioners—will be more or less affected by it. The establishment of the higher grade of the Fellowship, only now to be obtained on special examination by candidates who are at least twenty-five years of age, and have devoted six years to the study of their profession at specified schools or hospitals, is quite a new state of things. Nor is this all; for, in addition to this lengthened professional study, a superior preliminary education is insisted upon, embracing a competent knowledge of the Greek, Latin, and French Languages, and the elements of mathematics, to be certified by special examiners. Some relaxation of this part of the by-laws is allowed for those who are now members of the College, after they have attained a certain standing; but all future members, and others who aspire to the Fellowship direct, without having been previously members, must comply with these regulations.

"The candidate for the Fellowship must have been engaged for six years in the acquirement of professional knowledge in recognised hospitals, or schools of surgery and medicine within the United Kingdom, or in foreign countries; and three of such years at least must have been passed in one or more of such hospitals or schools in London. The candidate is to have attended the surgical practice of a recognised hospital or hospitals during four years, and the medical practice for one year.

"He must have studied anatomy and physiology during three winter sessions, and have attended lectures on the Theory and Practice of Medicine, on Clinical Medicine, on the Theory and Practice of Surgery, and on Clinical Surgery, during two sessions.

"He is also required to have attended one course on each of the following subjects; viz. Chemistry, Materia Medica, Midwifery, Medical Jurisprudence, and Comparative Anatomy.

"He is to have served the office of house-surgeon or dresser in a recognised hospital in the United Kingdom; and he is to present for examination clinical reports, with observations, of

six or more surgical cases, taken by himself at a recognised hospital, with certificates of their authenticity and genuineness.

"Candidates who have taken the degree of B.A. at an English university are not required to undergo an examination in languages and mathematics; and the period of their professional study is reduced to five years.

"Gentlemen, all these matters ought to be correctly understood by you, because the plan necessary to be pursued, in order to obtain the Fellowship, will be materially different, in several respects, from what you would have to follow for the ordinary diploma. If you mean to try for the Fellowship in the first instance, and at the earliest legitimate age, your time of professional study will be from the age of nineteen to that of twenty-five; but if you mean to go up with the degree of B.A., the age of twenty will be early enough for you to enter at a medical school. If you intend to qualify for the ordinary diploma, which can be obtained at the age of twenty-one, four years' professional study at a recognised hospital and school is the condition fixed upon by the regulations to render you admissible as a candidate.

"Whatever may be the defects of the new charter, and however well founded the disappointment, caused by the impossibility of doing full justice to all in the late nominations to the Fellowship, it is my sincere belief that, inasmuch as this charter enforces a higher standard of education, both general and professional, as an essential step to the superior grade, it will not only promote the advancement of scientific and practical surgery, but confer rank, influence, honour, and dignity, on the surgical profession."

We take the opportunity of Mr. Cooper's exposition to make known to our younger friends what will be required of them if they would aspire to the Fellowship of the Royal College of Surgeons of England. We are sorry to differ with Mr. Cooper upon this subject. The Fellows are all intended by the concoctors of the Bill and Charter to be men of means and position in society; they can never form more than a minority—a small minority—of the profession, and their practice will all lie among the wealthy and the great. But we are of opinion that the wealthier portion

of society will always find itself provided with the Doctor Sangrado of the profession, irrespective of legislative enactment; we do not think it in any way requisite to legislate for the aristocracy of the country, in the matter of highly educated medical men: these they will always be able to command without any special provision made by act of parliament; it is for the *Gil Blas* of the profession, and for his patients, the commonalty, that we are solicitous. And this point we think Mr. Cooper overlooks entirely in his commentary on the Charter—it was not his cue to do otherwise; Mr. Cooper is a member of the Council of the Royal College of Surgeons, that has separated itself from its constituency—its members—and proposes to stand alone and isolated, or, as it has been said, to exist through the rotten support of partiality and favoritism, setting at defiance every principle of right, to say nothing of fair play, which is only right of another kind, and singularly dear to the nature of Englishmen.

Mr. Cooper recommends the young men he is addressing to strive for the highest place. "Your first ambition," he says, "should be to belong to the enlightened class in the profession, who (to use the words of Dugald Stewart) 'are distinguished from the half-informed multitude who follow the medical trade.' Endeavour to be courted by society, not for your professional skill alone, but for your learning, intelligence, and general information, combined with strict moral integrity, and all those delicacies of thought and conduct which are essential to the character of gentlemen." Surely this is right, but as we said, the Fellowship is among the *reserved* seats. The Bill, and the Charter, which is but a rider on the Bill, do not provide Fellows as the representatives of the medical profession, but Licentiates in medicine and surgery, with a minimum of education; more than this, the authors of these measures have very obviously contemplated leaving the community to the care of wholly uneducated persons—to the care of chemists and druggists, to say nothing of empirics and quacksalvers of every style and denomination.

But we have already far exceeded our limits in this notice of a pamphlet of but some thirty-four pages. Its

subject, and the distinguished member of the profession who is its author, must be our apology. We have only quoted the graver matters: the Discourse deserves to be read; its quiet humour, and its excellent sense combined, give it a rare charm, and add a zest that makes reading a real pleasure.

MEDICAL GAZETTE.

Friday, October 25, 1844.

"Licet omnibus, licet etiam mihi, dignitatem
Artis Medice lueri; potestas modo veniendi in
publicum sit, dicendi periculum non recuso."
CICERO

THE EDUCATIONAL PROPOSALS OF THE COUNCIL OF THE ROYAL COLLEGE OF SURGEONS.

WHEN we begin to feel aweary in the course we have been pursuing ourselves, we have a shrewd suspicion that those who accompany us are also beginning to be fatigued. We have set ourselves the task of going through the Medical Bill, clause by clause; and we mean to accomplish the labour;—we beg for one week's relaxation, both for our own and our kind readers' sake.

We are often indebted to our friends and correspondents for a hint, which serves us by way of text for our weekly essay. The following letter came some short time ago into our hands, and we have to apologise to its writer for not having sooner made the use of it he doubtless intended we should:—

To the Editor of the Medical Gazette.

SIR,

I have just now quitted the perusal of one of the numbers of your last volume, which contains a very learned article "*On the Army Surgeon.*" I most cordially agree with the author of that article, Dr. Hull, that "some distinct history is wanted of army surgeons;" but, in connection with an account of the most distinguished army surgeons, and their contributions to science, it were very desirable that we should have a brief history of the rise and progress of the medical branch of

the British army. I lately observed a letter in the Naval and Military Gazette, recommending a work of this kind; and as there are 500 well-informed medical officers on full-pay, it is difficult to imagine why it has not been undertaken long ago. It does not appear that any specific general code of military hygiene has ever been promulgated for the guidance of military and medical officers in the British army. Why are we so far behind other countries in this respect? Dr. Hull observes, that "the Director-General has done wonders to secure the comfort of medical officers, to maintain their dignity, to secure their efficiency, and to advance their science." What has been the result of this distinguished patronage? In what respect, and to what extent, has the science of medicine been thereby promoted? The public have no means of obtaining information on these subjects but through the periodical press.—I am, sir,

Your obedient servant,

A HUMBLE INQUIRER.

Peterhead.

We think we can answer one or two of the important points in our correspondent's letter. Why we have no history of our army medical men, may probably be because biographical and historical writing of any kind is at a discount in England at this time; it is at a double discount in connection with medicine and medical men, seeing that literary tastes and talents, instead of proving of service to the physician or surgeon of Great Britain, rather tend to damage him in public estimation. This fact is greatly to be regretted; it is impossible to calculate the amount of good that is *not* done, merely through want of the habit of writing, and the indisposition to write which a conscious want of facility in the operation engenders. He who fills an office in any of our great establishments for the treatment of disease, ought to hold himself responsible to the public and his brethren for making the utmost of his opportunities; the physician, the surgeon, to a great hospital, is not

there merely for his own special aggrandizement; he is bound to impart, by teaching and writing, what he meets with that he knows must be useful and interesting to the profession of medicine at large. All cannot have such opportunity; but all may be made in a signal measure to share in its advantages.

Our excellent friend Dr. Marx, in his letter to Dr. Gregory, the author of the far-famed *Conspectus Medicinæ Theoreticæ*, published in this day's GAZETTE, adverts well and opportunely to the advantages of literary tastes and habits, and shews that some of the very first masters in our art were men who were even scrupulously nice in their diction. Cuvier was an elegant scholar, and one of the best writers of his country; yet who shall say that he was not a practical man? William Hunter says expressly, that considerable writers have for the most part been considerable practitioners also; and he was himself one of the most brilliant examples of the finished scholar and man of letters attaining to the highest position as the practical physician. Nay, our own persuasion is, that no man without the habits of attention and observation and arrangement, which the practice of committing his thoughts to paper alone calls forth and cultivates, can ever attain to anything more than a merely secondary place in his profession. He may, by force of family connection and influence, be furnished with a brilliant place as physician or surgeon to an hospital; he may, even, by dint of what is called tact, or as the French have it, *savoir faire*, acquire name and fame as a practitioner; but his reputation does not extend beyond his own circle, or the city he inhabits; he is no member of the republic of letters; he has never impeded the wing of time with a new feather; he has probably done nothing more during life than feather his own

nest somewhat warmly. It frequently happens, when the name of such a man is mentioned to a distinguished foreigner, that the distinguished foreigner has never heard of him: had the distinguished foreigner lived in London, or wherever else the successful man was domiciled, he would not have been so ignorant. He who out of the store of ample, of unusual, opportunities, contributes nothing to the common stock of information, cannot be held to have lived to purpose, though he may have founded a family and made a handsome fortune.

Mr. Cooper, in his Discourse, noticed in this day's GAZETTE, speaks of the accomplishments which the Council of the College of Surgeons mean to require in the future candidate for its Fellowship. The object aimed at is evidently to get classical scholars for surgeons as well as for physicians. We are far, very far from objecting to this; we shall be delighted to see a larger infusion of the *literæ humaniores* into the minds of surgeons. From henceforth we may trust that they among them who fill the principal places will be better disposed than their predecessors, or than they themselves have yet been, to estimate general information and learning in others. That they will not, as in times past they have frequently done, check the aspirations, and even injure the prospects, of men unfavoured by private fortune or family influence, who are struggling manfully with adverse circumstances, by cold words to the effect that, "they were mere men of letters," that "they were not practical men," and the like. Letters, it is certain, will not give experience; but experience, we insist on it, is most powerfully and most effectually aided by letters. The dreamer may be well lodged in the body of him who is no student;—the speculator in science at the present day, indeed, is always the

indifferently informed man; and the practical man may be, and often is, the core, the life, the soul of the devoted student.

With the encouragement of liberal acquirement on the part of the Council of the Royal College of Surgeons, we have better hopes of the profession, both in reference to future members, and to present consideration with the public of men who are really informed beyond the procedure in given circumstances that is adopted at St. Bartholomew's, or St. George's, or the Borough Hospitals, of men who prefer reading and writing, and the quiet of their study, to whist and idle assemblies. The time may come, must come, is come, if the Council of the Royal College of Surgeons mean anything of good by their enactments, when these men will not be twitted with their tastes and their accomplishments, by the so-called practical men, the gossips of the hospital board-room, through the earlier years of their professional life; by and by the inefficient because ill-informed occupants of the principal offices in the establishment. With the habits and talents which the more liberal course of study now to be required of the student in surgery will develope, we hope that our correspondent, or another, his representative in times to come, will be furnished forthwith with a history, not only of British military medical men, but of British military surgery. That this is still to write cannot be laid to the charge of the Director-General of the Army Medical Department. He has made as much as could be made of the materials with which he has had to work; and seeing that his ranks have mostly been recruited with levies of raw youths, often little more than 18 or 19 years of age, and, of course, defectively educated both generally and professionally, it is a wonder that he has been able to do

so much as he has unquestionably accomplished. The Council of the Royal College of Surgeons, in their educational enactments, seem disposed to sow the seed that will by and by bring forth such good fruit as our correspondent requires, among much besides that we doubt not will be found excellent.

MOVEMENT IN THE PROFESSION.

ON Tuesday last a large meeting of the general practitioners of Bradford took place, for the purpose of considering the New Medical Bill: Mr. Beaumont in the chair. "Hailing with satisfaction the introduction of a bill into parliament for the better regulation of medical practice, which the meeting was of opinion contained provisions calculated to raise the position of the medical profession, and to secure a higher and more uniform standard of qualification, it still maintained that the Apothecaries' Act of 1815, though it contained much that is objectionable in principle, yet that its unconditional repeal would be attended with evil to the medical profession and to the public, by removing all restrictions on unqualified and ignorant persons: having, however, experienced the reluctance and also incapacity of the Worshipful Company of Apothecaries, to check illegal practitioners, it is the hope of this meeting that some more stringent and summary measure be introduced into the bill, for the better protection of the public as well as the profession."

A committee was then formed for the purpose of holding communication with the borough members, &c. The meeting was most harmonious: all the resolutions were passed unanimously.

At CHESTER on the 10th inst., a meeting of the medical men of that town and neighbourhood was held at the infirmary Dr. Thackeray in the chair. The business of this meeting may be summed up in this single resolution.

1.—It is the opinion of this meeting, that the present state of the medical profession requires numerous and speedy amendments; and whilst we cordially admit that many of the proposals made by Sir J. Graham would materially effect desirable and extensive improvements, still we conceive that there should be appended to the bill a

decisive protecting clause, to punish the unqualified, and to protect the public from the practices of untaught and unskilful pretenders.

A petition in conformity with the views here declared was then agreed upon: a committee was appointed to keep a sharp look out upon Sir James Graham, to confer with the county members, &c., and the meeting separated.

At SHEFFIELD a numerous meeting of the members of the profession was held in the Cutler's Hall on the 16th inst.: Dr. Thompson in the chair. Resolutions well drawn and carefully worded, were adopted, to the effect that whilst the meeting viewed with satisfaction the attempt now made to put an end to the dissensions unfortunately for some time back existing in medical government; the endeavour to connect so important a branch of the social community of this country as its practitioners of medicine with the state; the registration of medical men, and that clause of the bill by which degrees in medicine conferred without residence and without examination are not recognized, yet that in the opinion of the meeting, certain provisions of the intended bill were decidedly objectionable, especially that which removed all restriction on the practice of physic and surgery.—But the sense of this meeting is well shown in the petition which they agreed upon, and which is as follows:

"That your petitioners witness with great satisfaction the introduction of a bill intituled 'A Bill for the better regulation of Medical Practice throughout the United Kingdom,' which by its provisions will, in the humble opinion of your petitioners, conduce to the dignity and interest of the medical profession by connecting it with the state, by favouring an efficient registration of all legally qualified members, and by not recognizing degrees in medicine conferred without residence and without examination.

"That your petitioners deeply regret that the intended bill does not afford that protection from the irregular practices of unlicensed persons to which all legally qualified practitioners feel they are fully entitled, and humbly pray that your Honourable House would be pleased to enact some clause by which

such persons shall be more summarily dealt with, and such practices effectually prevented."

At a meeting of the profession held at SHREWSBURY, resolutions were passed expressive of satisfaction that the government had at length interfered in the subject of medical reform; that whilst several of the provisions of the bill were hailed with satisfaction, yet that it seems imperative, should the act of 1815 be repealed, that some other enactment should be substituted for it, for the protection of the public and the profession against irregular practitioners. A petition to the houses of parliament was then agreed on, and arrangements made for deputations to wait on the county and borough members.

At COLCHESTER, a large meeting took place on the 15th inst.: Alderman Partridge in the chair. The worthy alderman went further than any whose words we have yet seen reported in connection with the bill. Far from giving utterance to either doubt or dissent, Alderman Partridge expresses his concurrence generally with the provision of Sir James's bill, which, indeed, as a first attempt at legislation, he thinks *approaches very near perfection!* Many men, many minds: Sir James Graham must be satisfied of one thing at least by this time, that he will never get the medical body to be of one opinion in regard to any measure he may propound. The meeting over which the alderman presided, however, seemed to be every thing but of his way of thinking: in proposing the 1st resolution, Dr. Williams characterized the Council of Health and Education as a body "to be invested with extravagant and irresponsible authority," and as involving "monstrous inconsistency in its formation;" whilst the resolution itself, which was carried *unanimously*, contains these words: that the bill, as brought forward by Sir James Graham, "is made inadequate to the purposes proposed."—It is inadequate to the purposes which Dr. Williams and the Colchester meeting propose, we make no doubt; but we are not so sure of its inadequacy to effect the objects which its framers had in view.

The second resolution most strongly protests against the repeal of the act of

1815, unless an equivalent protection be substituted, and an uniform elevated standard of professional education be enforced;" nevertheless, Dr. Chambers, in seconding this resolution, was inclined to view the bill as a whole favourably; the introduction of a clause enforcing a penalty for irregular and incompetent practice, recoverable by some inexpensive process, would bring the measure as near to perfection as could be expected. Other speakers took less favourable views of the tendency of the bill; but the whole meeting appears to have been conducted in very good taste, and with a perfectly good understanding. A petition was agreed on, in which, in spite of the smooth words of Alderman Partridge and Dr. Chambers, the bill for the better regulation of the medical profession is boldly stated "to be inadequate to such an end" it is, farther, "viewed with dissatisfaction and disappointment, because while professing to protect the public health and the medical profession, its tendency is believed to be grievously destructive of both, since it offers direct encouragement to empiricism with its enormous and incalculable evils, and tends to degrade the educated and legalized practitioner, and to retard and discourage medical science;" in fine, after objecting to the repeal of the act of 1815, without some more stringent substitute for it, and to the Council of Health as "exceedingly defective and objectionable," the petitioners "pray respectfully and earnestly that the above named bill may not pass into a law."—Here, then, are men evidently of peaceable disposition and good feeling, blowing hot and cold, saying "aye" in one breath, and "no" in another, and altogether shewing a want of consistency and independence which we often regret in our profession. We fear that there is something at the bottom of the "lip honour" and support of the one party, and of the more consequent, and therefore powerful opposition of the other party, which does not appear. In such a meeting as that of Colchester, we see, in fact, the spirit that dictated the bill arranged on the one side, and that which now opposes it so lustily marshalled on the other. The doctors may talk, and as Sam Slick, would say, use "soft sawder" to the authorities and their bill, to any extent they please, but

resolutions damnatory of all they had been saying, carried *nem. con.* too, they themselves, therefore, gainsaying all they had just uttered, present our brethren to us in a light which is very far from favourable, whether we look on them on the side of intellect or of character.

We have notices of other meetings which are purposed, and of which we shall speak in due season, particularly one to be held at Northampton, and another at Chichester, both on the 31st instant.

SYDENHAM SOCIETY.

[WE have the following from a learned and esteemed contributor.—ED. GAZ.]

OUR opinion of the new Latin edition of Sydenham has been already expressed; but as we understand that the Sydenham Society proposes to publish also an English translation of his Works, perhaps we may be excused if we venture to give a few hints on the mode in which we think that this and other similar versions should be executed. To enter upon the subject of Translation generally would be an interesting, and not wholly unprofitable employment; but still we must not allow ourselves to forget that ours is a *medical*, and not a *philological* journal, and therefore we must be content to confine ourselves to the subject now before us. Our remarks will have special reference to Sydenham; but, as many of them will apply equally to most of the other older authors, perhaps they may be useful to some of those gentlemen who are thinking of translating their works for the Society. We had intended to say something on the text that should be used, the amount and character of the notes that should be given, and some other similar matters; but these we shall reserve for some future occasion (if any should occur), and merely at present offer some suggestions on the *style and language* in which we think these old writers should be brought before the English public.

Of Sydenham's Works there are two translations; one by Dr. Pechey, which was first published in 1693, and of which the eleventh edition appeared in 1740; and the other by Dr. Swan, which first appeared in 1742, reached the fourth edition in 1763, and was considered so good by Dr. Wallis, that

he republished it in 1788, with a very few verbal alterations. The question naturally arises, which of these two translations should be taken as the basis of the new one? and probably most of our readers will at once be inclined to prefer the later, on the presumption that a new translation would not have been made if it had not been wanted, and would not have been published if it had not been better than the old one. Such, we confess, was at first our own idea, but we remember to have learned at school that *Ἀτ' δευτέρα πῶς φροντιδὲς σοφώτεραι* (Eurip. *Hippol.* v. 438), or, in plain English, that "second thoughts are best;" and, accordingly, we have since seen reason to alter our opinion. Apparently Drs. Swan and Wallis aimed at bringing Sydenham's Works up to the standard of medical science in the last century, and also at modernising his old-fashioned style. These two objects they endeavoured to effect, first, by adding a quantity of "notes, corrective and explanatory, from the most eminent medical writers, adapting the whole to the present improved state of physic;" and, secondly, by omitting various epithets, proverbial phrases, and classical quotations and allusions, which were commonly used in the seventeenth century, but had grown out of fashion in the eighteenth. We are inclined to think that they failed in both these attempts. With respect to the scientific part of their task, we should very much doubt whether even Dr. Wallis's "corrective and explanatory notes from the most eminent medical writers" could have succeeded in adapting Sydenham's Works to "the improved state of physic" in the last quarter of the eighteenth century. On the literary and philological question we can speak with still more confidence. We forget at the moment who it was that spoke of a bad translation as having "*done* his author *out* of Latin, without having *done* him *into* English;" but this expression seems exactly applicable to the labours of Drs. Swan and Wallis. By means of the omissions and alterations before noticed, and also by using the common literary words and expressions of their age, they have effectually *done* Sydenham's Works *out* of the style and language of the century in which he lived, but they have unavoidably left so

many peculiarities still remaining, that they have not been so successful in *doing* his writings *into* that of their own. So that altogether their work is a perfect anomaly; it is too modern to be read as a work of the seventeenth century, and too old-fashioned to pass for one of the eighteenth; and therefore cannot be read with satisfaction in either point of view. If this was the case in the last century, much more would it be so in the present; and therefore we are inclined to think that the translator should abandon the ambitious aim of making Sydenham write as if he had lived in the nineteenth century (which, indeed, could only be done by a person of kindred mind with Sydenham himself), and content himself with presenting his work to the public as nearly as possible in the state in which Sydenham would have written it if he had used his native language. If this be admitted, the question which we proposed above suggests at once its own answer. Pechey's translation was published so soon after Sydenham's death, that it may be considered as a contemporary work; and though he occasionally takes more liberties with his author than we hope the new translator will allow himself, yet the omissions and alterations are of a different kind from those which we find in Swan and Wallis, and are apparently rather the result of carelessness than design. We think, then, that Pechey's translation (however quaint and old-fashioned it may appear to those who are not familiar with the style of the writers of the seventeenth century) should be taken as the basis of the new one, or rather that the new one should be merely a revision of the old; and if this be done carefully, we are inclined to think that the editor will find that the labour of revision will not be much less than would have been that of executing an entirely new translation of his own.

We had thought of confining ourselves to the style of the text, but we must be allowed to add the following remark as a short corollary to what we have said above on the futility of the attempt to bring Sydenham's writings up to the standard of modern science; whence it follows that the notes, instead of attempting to correct errors of the text, or to supply its deficiencies, should be simply explanatory and illustrative—not that we do not think

generally best performed in the fewest words.

PHYSICAL SOCIETY OF GUY'S HOSPITAL.

T. CALLAWAY, Esq. in the Chair.

ON Saturday the 19th, the second meeting of the session took place; the President congratulated the society on the numerous attendance, and apologized for the non-appearance of Dr. Ashwell's paper as promised last meeting. An interesting case of foreign body in the throat, was read by Mr. Cole, dresser of the hospital. A child, aged 1½ years, while playing with a large piece of plum stone, placed it in its mouth, and was suddenly seized with the most alarming symptoms of asphyxia. By the advice of a neighbouring practitioner the child was sent to Guy's Hospital, which was fortunately close to the residence of its parents. The dresser immediately passed his finger over the tongue into the larynx, and felt the foreign body, but being unable to dislodge it by this means, he directed the child to be held up by its heels, and in this mode, with the aid of a probe passed by the side of the finger, he succeeded in removing it. The child was now taken by two assistants, who practised artificial respiration by compressing the ribs, and eventually restored the natural breathing; the child has since done well.

A discussion ensued, in which several cases of foreign bodies entering the larynx, and being subsequently expelled by the natural powers, or by the operation of opening the trachea on the one hand, or proving fatal immediately by asphyxia, or remotely by inducing phthisis on the other, were related or alluded to by different speakers, one in particular by Dr. Bossy, where an ear of hordeum prateuses was accidentally drawn in by a child between 3 and 4 years of age, and subsequently ejected impacted in mucus. It was somewhat curious, he observed, that the father of this child, a nobleman, became the victim of phthisis from accidentally swallowing a single grain of barley, which was found on inspection after death within the pulmonary excavation. The length of time that respiration could be suspended in cases of submersion in the adult, and of the fœtus, in footling births, and after the death of the mother, so as to ascertain the prospect of recovery in still births, and how long after the mother's death there was any hopes of saving the child by the Cæsarean operation, as well as the best modes of treatment in cases of threatened asphyxia, were simultaneously and rather actively discussed till the hour of adjournment arrived when the

author, and a paper on Hooping Cough by Mr. Streeter was announced from the Chair for that day fortnight.

CHEMISTS AND DRUGGISTS.

To the Editor of the Medical Gazette.

SIR,

I PERCEIVE that at many of the meetings held for the purpose of considering Sir James Graham's Medical Bill, the Apothecaries' Company have been lauded, and I must allow deservedly, for raising up a highly qualified body of medical practitioners—a duty which appertained more properly to the higher bodies in the profession, viz. the two Colleges of Physicians and Surgeons, but which was most egregiously neglected by them. At the same time that we are bound in honour to acknowledge that to them is owing the increased acquirements and efficiency of the *general practitioner*, it will be impossible to deny that they have entirely forgotten and neglected the duty *actually* devolved upon them by the Act of 1815, by the legislature, viz. that of providing *apothecaries*, whose duty was, as specified in that Act, the careful and accurate dispensing of physicians' prescriptions with pure and unadulterated drugs, &c. Now the slightest inquiry will shew, that the great bulk of their licentiates utterly repudiate the idea of dispensing a prescription for any one whom they are not attending in the capacity of a general practitioner. And as respects dispensing assistants, to secure whose efficiency County Boards of Examiners were provided by clause 18, it is no uncommon thing for the boy who commences by carrying out the medicines being gradually advanced to the important post of compounder of prescriptions, where he continues till he is old enough to be his own master, when he commences business for himself as one of that favoured body so specially protected by clause 28, viz. chemists and druggists, to whom the major part of prescriptions must unavoidably be sent. Under these circumstances, I, for one, cannot but feel, that unless the Apothecaries' Company are prepared not only to resume their original duty, but also to apply to Parliament for additional power, enabling them entirely to control the compounding and retail sale of drugs and chemicals, the Act of 1815 ought to be repealed, and some other body be appointed by the legislature for that object.

The judicious prescription of the physician, surgeon, or general practitioner, will avail little, if pure and unadulterated articles are not used in the composition of it; and, whilst any one may engage in the business of a chemist and druggist, there is no guarantee that such, and such only, will be used. As regards the *sale* of drugs, why it is notorious that any one who chooses to combine

the sale of opium and arsenic with that of sugar and starch, may do so, the law assuming that every one is capable of protecting himself! Mr. Taylor, in his able report on Toxicology, states that more than a hundred lives are yearly sacrificed in England and Wales, by the unrestricted manner in which arsenic is sold. Surely it is the duty of the legislature to protect individuals against those accidents which are liable to occur through the ignorance or criminal neglect of others. This question, which so deeply concerns the public at large, fails to excite that continued attention which it ought to do, because it generally comes before them in single instances, when the coroner's inquisition, or a trial for manslaughter, takes place. It therefore becomes the duty of the medical profession, who are perfectly acquainted with the magnitude of the evil, to press upon the attention of the legislature the immediate necessity for an effectual protection against this sacrifice of life.

Though the chemist and druggist is at present out of the pale of the profession, and however much we may be disposed to look down upon his position, it is impossible to deny his connection with the present practice of medicine, and that to a very important extent. What avails the beautiful idea in the mind of the sculptor, if he cannot obtain the block of marble to embody it? Believing the present to be a favourable opportunity for the consolidating and arranging of all medical questions, I am induced to solicit your attention, and that of your numerous readers, to a branch of the subject which, I regret to think, too many consider unworthy their consideration, but which, if left to itself, will be a source of discord to the profession, and of injury to the public.

I am, sir,

Your obedient servant,

GEORGE SOULBY.

Dover, Oct. 7, 1844.

SOCIETY FOR THE RELIEF OF THE WIDOWS AND ORPHANS OF MEDICAL MEN IN LONDON AND ITS VICINITY.

A HALF-YEARLY general Court of this useful and excellent Society is advertised to be held next Wednesday evening, in the Gray's Inn Coffee House, Holborn.

The new President, recommended by the Court of Directors, in the room of the late Sir Henry Hallford, is Sir Charles M. Clarke; and, doubtless, Dr. Latham will be chosen to fill the office of Vice-President, which will thus be vacated. Mr. Hunter, of Mincing Lane, has expressed his readiness to undertake the office of acting Treasurer, in place of Mr. Bacot, who retires, after having for many years ably discharged the duties of that important trust.

WILSON & OGILBY, 57, Skinner Street, London.

THE LONDON MEDICAL GAZETTE,

BEING A
WEEKLY JOURNAL

OF
Medicine and the Collateral Sciences.

FRIDAY, NOVEMBER 1, 1844.

LECTURES
ON THE
NATURE AND TREATMENT OF
DEFORMITIES,

*Delivered at the Bloomsbury Square
Institution.*

By R. W. TAMPLIN, F.R.C.S.E.
Surgeon to the Institution.

TREATMENT OF TALIPES VALGUS.

GENTLEMEN,—At our last meeting I pointed out to you the character of talipes valgus; that it was both congenital and non-congenital; that it consisted in a sinking of the bones forming the arch of the foot, from a yielding of the ligaments and of the plantar fascia, together with the muscles of the sole. That both the longitudinal and transverse arches were gone, and that a perfectly flat position of the bones of the tarsus was the result, combined with an eversion of the anterior portion of the foot; this effect arising from the greater amount of muscular power being in the middle and outside of the foot. That the internal lateral ligament is elongated, as well as the calcaneo-scaphoid ligament. That the muscles in their action have a tendency to increase the malposition, in consequence of the firmness of the fulcrum upon which they act being to a great extent destroyed; that this applies to the muscles in the sole of the foot, as well as to those passing over and through it; that it was unaccompanied with paralysis, and appeared to me to originate primarily in the yielding of the passive connecting media between the tarsus and metatarsus. That in the congenital cases, I regarded it as the result of position maintained during the embryotic existence up to the period of birth. That non-congenital cases are met with in persons of all ages, and that a general weakened constitutional condition is a predisposing cause; although the deformity was often attributed to

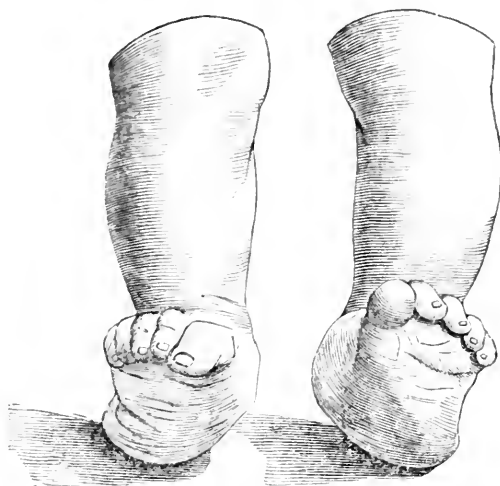
much standing in one position, or to the effect of carrying heavy burdens. That in the most severe cases the motion of the joint is altogether interrupted, from the astragalus falling on its inner side and lying in an oblique lateral position in the articular cavity; the outer articular surface pressing on the articular surface of the fibula; the inner on the corresponding articular surface of the tibia, and to this I attribute the pain experienced by the patient in walking: that at times the patient would almost appear to touch the ground with the inner ankle; that at all times great lameness and difficulty in walking are the result, and that occasionally those suffering from this deformity had been obliged to abandon their ordinary occupation. That the muscles generally found contracted were the peronei and extensor communis digitorum, the peroneus longus et brevis everting the foot; the peroneus tertius and extensor communis raising the outer edge thereof. That the method I had adopted of dividing the peroneus longus and brevis consisted in passing a sharp-pointed knife between the tendons and the bone, with the flat surface of the knife to the tendons; afterwards turning the knife half round, depressing the handle, and with the sharp edge towards the tendons dividing them. That in dividing the common extensor you would pass the knife on the inner side beneath the whole at the same time, and divide them by one operation. That after the punctures were healed you would commence the extension and adduction, which being accomplished you would proceed with the flexion; and as soon as the foot was brought into position the arch of the foot should be supported with a cork sole with a support reaching from below the knee. That it was absolutely necessary to maintain the position uninterruptedly, night and day, for a longer or shorter period, until the foot could support the weight of the body without a return to the malposition unaided by any artificial support. That if the patient be allowed to use his foot previously

to attaining this, a return of the deformity would be the inevitable result. I then drew your attention to the two kinds of deformities which were considered as a compound of those previously described, namely, that of contraction of the gastrocnemius muscle combined with either eversion or inversion of the foot, and which I designated by the respective terms of talipes equino-varus, and talipes equino-valgus. That I considered it an unnecessary multiplication of names, especially as regards talipes equino-varus, as both in varus and talipes equino varus the causes are the same—the muscles contracted the same, the treatment the same, differing only in degree. That in talipes equino valgus there is, however, a contraction of the gastrocnemius which I did not consider to exist in true valgus, although at times in more severe cases there has appeared to be, and in one instance was, a contraction of that muscle. That the two deformities differed in their cause: the one arising from debility without any functional derangement in the muscles, or nerves supplying them; the other arising from irritation of the brain or spinal cord, thereby causing paralysis of the anterior tibial muscle, and that these causes were generally found to be the origin of these species of deformities. That the same treatment was to be adopted in both instances, but that in those cases where paralysis still existed, recourse must be had to continued mechanical support, both to sustain the arch of the foot, and also to prevent a recontraction of the muscles, but that after the ligaments had regained sufficient strength to support the weight of the body unassisted, that the patient might be allowed to wear a common boot or shoe after the active duties of the day were over, and gave you an instance of this occurring in a patient in whom the greatest laxity of ligaments and the most extensive of motion existed; yet by retaining the foot in position for twelve months, the ligaments had recovered themselves sufficiently to enable the patient to adopt the course mentioned, that of leaving off the support in the after part of the day.

We come now to consider another species of deformity or distortion of the foot (viz.) talipes calcaneus, so named from the posterior extremity of the os calcis pressing upon the ground in walking, the foot being kept in the flexed position unaccompanied with lateral distortion, or at least so slight as not to be considered as such. In talipes calcaneus, then, you have little or no malposition of the bones, the deformity being rather an extreme amount and permanent condition of one of the natural motions or positions of the foot, and this being the flexed position. In those cases I have enumerated, you have, it is true, the extreme instance of the natural position, but you have

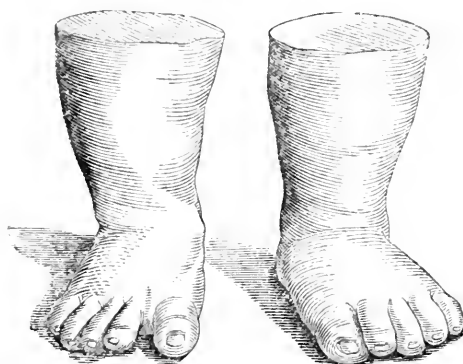
also more or less displacement of the bones themselves, and more or less alteration of the ligaments, they being either contracted or elongated. In some cases of talipes equinus, however, you have very little displacement of the relative position of the bones, and it is a circumstance worthy of notice, that in these two deformities, the one being directly the reverse of the other, that they should correspond in this particular—viz. being each an extreme of a natural position, unaccompanied with any other derangement in the bones, &c.; the one being the greatest amount of extension of the ankle-joint, *i. e.* in its complete form; the other the greatest amount of flexion. There is, however, this important difference, viz. in talipes equinus you most frequently find paralysis co-existing and originating from various causes, both local and general. But in talipes calcaneus we have but one cause, and that one arising during uterine existence, it being a congenital deformity. It consists, then, in the more or less complete flexion of the foot, unaccompanied with paralysis or loss of power in the gastrocnemius; but the anterior tibial muscle is contracted, together with the extensor pollicis longus, the extensor communis and peroneus tertius; in fact, the whole of the muscles whose tendons pass over the anterior surface of the ankle-joint; and owing to the integrity of the functions of the gastrocnemius and the muscles situated behind the joint, you have none, or scarcely any, deviation to either side, the patient walking on the posterior extremity of the os calcis. I have never yet met with the deformity in the adult, the cases presenting themselves being in infants and young children, and it is perhaps the most rare deformity met with, at least we have hitherto found it so. You will generally be enabled to bring the foot by the hand to a right angle, and occasionally below it, but on removing the hand the contraction of the muscles immediately draws the foot up again, and maintains it so. There is no want of muscular development in infants, although this must undoubtedly occur if the deformity be allowed to continue. I imagine that cases which have not been treated in early life have been subsequently relieved to a great extent by the effects of the weight of the body in walking, pressing up the heel and keeping the foot at right angles, and the gastrocnemius retaining its functions would assist during the efforts of walking; at least, this is the only reason I can assign for not having seen this deformity in the adult. It is unquestionably the most simple distortion to treat, at least by operation, which I should always recommend you to adopt, being comparatively painless, and after the division of the tendons most easily brought into an extended position. The plan I have adopted

FIG. 1.



An illustration of talipes calcaneus, taken from the cast of a child five weeks old.

FIG. 2.



The above after five weeks of treatment, which consisted in the division of the anterior tibial and extensor proprius pollicis, extensor com-

munis is the following : to pass in a small sharp-pointed knife on the inner side of the extensor communis, beneath the tendons of that muscle, and also that of the peroneus tertius, and to divide them ; then to introduce the knife on the outside of the anterior tibial and extensor pollicis tendons (which you will find raised from the joint) ; pass it inwardly (as it regards the leg) beneath them, turn the sharp edge of the knife to the tendons, and divide them ; you will then avoid the risk of puncturing the anterior tibial artery, which, although it might be compressed easily, had better be avoided : at the end of three or four days apply a straight splint from below the knee to about the length of the foot below the extremity of the os calcis, having

munis, and peroneus tertius ; afterwards extending the feet by means of the splints mentioned.

a hole cut in it to prevent pressure on the heel, and the whole being well padded and secured throughout its full extent, above the ankle-joint, by means of strapping, first bandaging or supporting the foot by means of adhesive plaster. You then have full power to extend the foot, without fear of displacement of the splint ; by passing a strip or strips of adhesive plaster over the anterior portion of the foot and passing it round the extremity of the splint : in this way, by keeping up the extension daily, which is done with the greatest possible facility, you will in a very short time, and without much, if any pain, bring the foot to its full extended position : after you have done so, it is as well to keep it in this position for a few days,

when I would recommend you to remove the splint and allow the mother to apply the bandage over the splint night and morning, giving the child an opportunity to exercise the foot for an hour or more each time, and when the tendency to contraction is gone, leave off the splint altogether during the day, and allow the child to wear a boot well fitted, so that the support may be uniform to the foot and ankle. There is nothing more simple or more easily accomplished than the cure of this species of deformity, in the whole range of orthopædic treatment.

I have extended the foot in this way without operating, but after the removal of the splint for any length of time the contraction has returned, which I have not found to be the case after section of the tendons with ordinary care.

You will perceive that I have a great preference for tenotomy in all cases where contraction exists, whether in infants at the earliest age or late in life; and the preference arises—1st, from the facility with which it is accomplished; 2dly, because it incurs comparatively no risk, and scarcely any inconvenience; 3dly, because you at once overcome the principal resistance, and render the after-treatment painless to the patient, and comparatively easy to the attendant, independently of which, the child is not subjected to such constant confinement of the limb, which is absolutely necessary when you do not have recourse to an operation; and it must be borne in mind, that the very confinement necessary to keep up constant stretching on the contracted muscles, at the same time renders those not contracted passive, and thus no opportunity is given for development, which alone can take place by exercise; whereas, after you have overcome the resistance by means of the operation (which is shortly accomplished in infants), you can allow exercise to be taken for a certain time during the day, and this, even in infants, must have a most beneficial influence; for although the child cannot walk, yet the will is as active, and the various motions of the extremities are as numerous and frequent, or even more so, than at any period in after life. This exercise is of the greatest possible importance to the development of the infantile muscles. I operated on an infant about four months since for the deformity last mentioned; and within a month from the time of the operation the splint was omitted during the whole of the day, and the child exercised the various motions of the joint with its natural facility; and from that time to the present no trace of recontraction has shewn itself; whereas, had not the tendon been divided, the foot must have been fixed perhaps for months, and the muscles of the limb below the knee kept very nearly, if not entirely, in

a passive condition; for although the child would instinctively direct its efforts to escape from the confined position, yet the motion must of necessity be so limited, that little or no beneficial effect could be anticipated as regards muscular development.

I must now draw your attention to another species of deformity of the foot. It is a compound of talipes calcaneus and talipes valgus, and is called talipes calcaneo valgus;

FIG. 3.



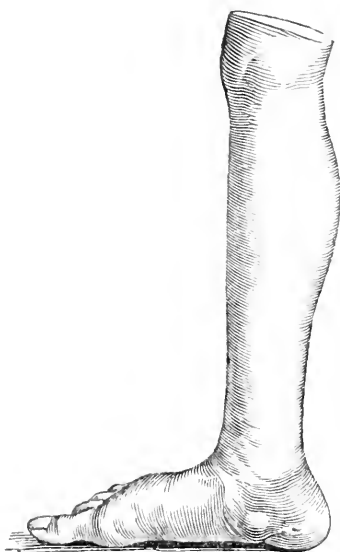
An illustration of talipes calcaneo valgus, in which may be observed the absence of the projection of the os calcis, and the great increase of the longitudinal arch, with the approximation of the little toe to the outer side of the os calcis.

and although its name is derived from the above-mentioned variety, and that it is in some respects analogous to them, yet I shall endeavour to shew you that it is totally different as to its cause and in its results. By talipes calcaneo valgus, then, you will understand, 1st, a falling of the posterior extremity of the os calcis (vide fig. 3); 2dly, an eversion of the whole of the anterior portion of the foot. The posterior extremity of the os calcis being approximated to the anterior and inferior portion of the foot; the length of the foot being diminished more or less, according to the time the patient has been afflicted with the deformity, and its severity: you have, then, the longitudinal arch of the foot increased,—the ligaments on the dorsum being more or less stretched and elongated, those of the sole, and the whole of the tissues, muscular and tendinous, contracted. It is non-congenital, and owes its origin to cerebral or spinal irritation, or disease producing paralysis, either of the gastrocnemius alone, or of the entire limb; upon recovery from which the gastrocnemius will be found very generally perfectly paralysed; and if you will direct your attention to this point, you will perceive at once the mode by which this deformity is caused. The os calcis, as you are aware, has inserted on its tubercle the gastrocnemius and plantaris muscles, by which its position is maintained, and by those muscles alone. If, then, this muscle loses its power, of course the os calcis can

no longer maintain its position. It has also the strongest ligament of the sole,—the plantar fasciæ and muscles attached on its anterior inferior surface; so that these muscles and ligaments, losing the firm fulcrum upon which they act, the one contracts passively from its position; the other, by their natural healthy action, have a constant tendency to draw down the posterior extremity of the os calcis, whilst the anterior tibial, together with the common extensor and extensor pollices, having no opposing power, draw up the foot altogether, the peronei everting it; and thus the patient is thrown almost entirely on the posterior extremity of the os calcis and inner ankle, from the increased length occasioned by the constant

stretching of the internal lateral ligament; and you will find the foot, as in other instances mentioned, especially of talipes equino-valgus, only much more severe, with an extreme amount of lateral motion, and constant weakness and instability of the articulation. It is frequently combined with paralysis of the whole limb, the contracted muscles excepted, and, of course, atrophy to a greater or less extent in all instances. In some cases you will find the gastrocnemius has, to a limited extent, recovered its power of motion, and no concomitant paralysis; but this is the exception, and of very rare occurrence. I have, however, met with it in a few instances. There is also the same reduced condition of the natural tone, and

FIG. 4.



An illustration of talipes calcaneo valgus, in which the gastrocnemius had recovered itself, occurring when the patient was two and a half years old, without any previous illness. The child was put to bed in apparently perfect health, and when taken up in the morning was found to have lost the use of both lower extremities, which continued for three or four days, when the opposite extremity recovered its lost power. The leg represented in fig. 4 did not recover motion for three weeks; at the end of that time, however, the child could again walk, but with considerable lameness, which continued to the time of my seeing her, al-

FIG. 5.



though the usual means, viz. embrocations, friction, &c. had been freely used.

The tendons of the extensor communis, peroneus tertius, brevis, and longus muscles, were divided, and extension and adduction maintained by means of Scarpa's shoe for ten weeks, when the foot was restored to its natural form and position, as represented in fig. 5, and the patient could flex and extend it at will, without any lateral deviation. She wears, however, a boot, with an upright support attached, to prevent a return of the deformity, while the ligaments are gaining strength in their normal position.

liability from slight causes to wounds or chilblains, the limb being incapable of maintaining its proper temperature, even during the summer months; in fact, you have the usual concomitants of a paralytic limb. The inconvenience occasioned by it is very great, as the patient possesses scarcely so useful a limb as a wooden leg would afford, as with

the wooden one he would at least possess firmness; whilst with this deformity, unaided by artificial support, he has none whatever. The weakness and pain experienced in walking, from the relaxed condition of the ligaments in severe cases, are very great, and the lameness very considerable, as there is no available motion in the

ankle-joint. In some cases you will find the weight of the body thrown entirely on the posterior surface of the os calcis, and the front part of the foot completely off the ground, the leg presenting a straight line throughout its entire length; when, on feeling for the tendo-Achilles, you will find, as it were, a small cord, lying perfectly loose behind the ankle-joint. This, I think, can scarcely be called structural *lengthening* of the muscles, although there is a degenerated condition of the muscular fibre, which degenerated condition is consequent upon the paralysis and constant elongation of the muscle to its full natural extent. And this appears to me to be an argument against structural shortening; for the greatest amount of contraction met with does not exceed the amount of lengthening which the muscle admits of, when paralysed from disease either at the origin or in the course of the nerves supplying it. Where, then, I would ask, is the *innate* muscular action? But to return:—

In these cases, as you must have anticipated, when paralysis of the gastrocnemius is present, our treatment can be only palliative; we can remove deformity, but we cannot give power. The first thing to be done is to endeavour to extend the foot, and to force the os calcis up again into its longitudinal position, which you will accomplish by dividing the contracted muscles, and extending the foot precisely as in talipes calcaneus, keeping up, however, a greater and more permanent amount of pressure on the dorsum, with or without the pad beneath the os calcis. It will assist you if you divide also the plantar fascia, and as much of the muscles in the sole as you can easily with safety do; you will then keep up extension of the joint to enable you the more effectually to increase the distance between the os calcis and anterior extremity of the metatarsal bones, and in this way gradually raise the posterior extremity of the os calcis, which you will find is almost perpendicular. You must proceed slowly, and with care, for the same reasons I pointed out to you in a former lecture, when the deformity was connected with paralysis; and after you have restored the position of the foot, you will order a boot and iron, with a stop-joint to prevent flexion, thus always keeping the foot at a right angle, giving the patient the opportunity of extending to a greater extent in the movement occasioned by walking on uneven surfaces, or down an inclined plane, which will assist in keeping the os calcis in position.

There can be no prospect of the patient ever being able to do without the support, and you will do well to prepare him for this, by informing him that he must wear it for life, or until a remedy or cure is discovered

for paralysis which has occurred in infancy, and been of some years standing. They will, however, walk with comparative ease and comfort, and be enabled to undergo almost, if not quite as much walking exercise as persons in general, but of course with more or less lameness. In those cases where there is no paralysis, although it has generally existed, you will, with attention to the position of the foot, be enabled to perfect a cure, and in course of time the patient will be enabled to walk without any assistance, and possess as useful a limb, to all intents and purposes, as its fellow which has not suffered. You must, however, adopt here, as in other instances, the greatest care and perseverance, as the cure depends on the position of the bones and ligaments being constantly maintained during the time exercise is allowed, and until all trace and tendency for the foot to assume its malposition has ceased. I may mention to you a mode of treatment which has been adopted, and which we once tried at this Institution, viz. the removal of a portion of the tendo-Achilles, say half an inch, or an inch, placing the two remaining ends in contact, and keeping them so for a length of time. I can imagine it possible to improve a patient much in this way, provided the two ends are kept in contact, or nearly so, for a length of time; but this is very difficult to accomplish, unless you have the patient entirely under your control, which you can scarcely expect to have as an out-patient, and the object to be gained is not sufficiently important for us to keep them as in-patients during the period necessarily required, because should we succeed so far as to give a firm natural support to the os calcis by this method, we could not give power, and even then recourse must be had to artificial support, and I do not see in what way a patient would be benefitted, who, in either case, must use the same means, or nearly so, during his life. In the case I have alluded to, I removed about two-thirds of an inch of the tendon, by making an incision directly over it, and exposing the sheath, laying it open, and with a hook raising the tendon; then with a knife removing the above-mentioned portion; but he being an out-patient, was necessarily obliged to be brought to the Institution, and although every care was taken that could be, under such circumstances, yet the foot was scarcely ever found in the position in which it was placed, in consequence of the constant moving occasioned by his being brought to the charity. I do not, therefore, consider it a fair trial, but for the reasons stated it is not an operation I should recommend, as you may obtain all the ends desired or expected without it.

MEDICAL CASES.

BY SOMERVILLE SCOTT ALISON, M.D.

Physician to the Northern Dispensary.

(For the Medical Gazette.)

1. *Limosis areus. Small Stomach.*
2. *Ossification of Gall-bladder.*
3. *Hypertrophy of Heart: white liver, &c.*

JULY 4, 1844.—Ann Wells, at. three months, was at birth a fine healthy child: when a month old she lost the mother's breast, in consequence of the nipples being diseased, and was fed upon baked flour, arrow-root, milk, and the like. For a month no symptom of disease was remarked, but at the expiration of that time the child began to vomit her food occasionally, and to assume an emaciated appearance. The vomiting has continued to the present time, and the emaciation has rapidly progressed to its present frightful extent. The child is strikingly attenuated, the features are much shrunk and the muscles of the face are corded. The countenance much resembles that of a very old person; the eyes are bright, active, and imploring. The mouth gapes almost without ceasing, the face is projected forward, an imploring cry is uttered, and the eyes seem to entreat for food with the utmost urgency. The appetite of the child for food is insatiable: except when sleeping, she is either in the act of feeding, or crying and gaping for food. Only part of the food is rejected by vomiting. Much fecal matter is passed, sometimes light yellow, and sometimes green. Urine is natural in quantity. The pulse is rapid. Thorax resonant on percussion. Abdomen dull above umbilicus, resonant beneath it.

7th.—The little patient died last night. This evening examined the body. The liver was healthy, and the mesenteric glands were free of disease. The stomach was much reduced in size, two inches in length; between the longer and smaller curvature, at the cardiac extremity, it measured three-quarters of an inch; at the pyloric extremity a quarter. The coats of the stomach were considerably thickened, but in no part were undue vascularity, discolouration, or ulceration, found. The pyloric orifice was less than usual, but not more reduced than the other parts of the organ. The rugæ of the stomach

were larger than usual; they lay flat, and resembled the very fine plaiting formerly in use for the fronts of shirts: each ruga was fully half a line in breadth. The entire stomach weighed one and a half drachms. The small intestines were much contracted also. The colon was distended with flatus, and was an inch and a half in diameter. The gall-bladder was distended with green bile. The contents of the thorax were perfectly healthy.

When this patient was presented to me, I was much struck with the extreme emaciation. The child had the appearance that one would look for in a case of absolute deprivation of food. The child had been under medical treatment before, and the parents had the impression that the child laboured under mesenteric disease. I was not satisfied that mesenteric disease was present, and determined, if possible, to examine the body after death, which was obviously near at hand.

The great diminution in the size of the stomach and small intestines seems to be well worthy of being recorded. The writer has not met with any instance of so extensive a contraction of these parts. A contracted condition of the stomach is common, he believes, in cases of starvation, and also in diabetes mellitus. The urinary bladder is not unfrequently seen in a state of great contraction, and this condition the writer frequently saw to a remarkable extent in the bodies of those who died of malignant cholera during the great epidemic of 1831 and 1832, when he was clinical clerk in the Castle Hill Cholera Hospital at Edinburgh.

The diminution of size of the stomach and the small intestines in this case, is not the result of inflammation. It is not due to any morbid alteration of the mucous membrane, but is obviously referable to unwonted contraction of the muscular fibres. Undue irritability of the stomach and small intestines had resulted from the introduction of improper and irritating articles of diet, at a season when nature has prescribed the maternal milk as the only proper food.

The baked flour and arrow-root were not sufficiently irritating to induce inflammation of the mucous coat, yet they sufficed morbidly to affect the muscular fibres, and provoke them to undue contraction. The muscular fibres thus

affected by a cause in hourly operation, at length assume a permanently contracted condition, and prescribe a diminutive size to the entire organ.

The denial of the human breast to the infant was the cause of this child's illness and death. The restive stomach immediately upon its receiving food made strenuous efforts to expel it: part was rejected by vomiting, while part was hurried on through the remainder of the alimentary canal, and expelled by stool. The short sojourn of the food in the stomach was incompatible with healthy chymification, and the rapid passage of the ill-digested aliment along the small intestines was no less adverse to the elimination and the absorption of the chyle. Hence the emaciated condition of the patient, and hence the insatiable hunger. There was constant waste of the body, and only a very imperfect repair.

That the emaciation and hunger did not depend on diabetes, is sufficiently established by the urine having been only in moderate quantity, by the soft and moist condition of the skin, and by the frequent stools.

It seems to the writer probable that this condition of the stomach and small intestine may not be very rare. He is inclined to think that a similar condition, though less in amount, may exist in some infants affected with vomiting and wasting, consequent upon unnatural errors of diet. May not some children supposed to be labouring under enlargement of the mesenteric glands be similarly affected? The question is not an idle one, for the affection of the alimentary canal is curable under proper diet and management. In the body of a child five years old, who died of phthisis pulmonalis and mesenteric disease, the writer within the last few days found the colon consisting of alternate dilatations and contractions; the dilated parts or pouches contained faeces, and the contracted parts were empty, thickened, but free of ulceration.

The absence of mesenteric disease in this case, is doubtless connected with the absence of ulceration in the intestinal canal. Had ulceration or an irritable condition of the mucous membrane of the intestinal canal taken place, then it is probable that disease would have been developed in the mesentery, either by the communica-

tion of irritation along the lacteals, or by the transmission of irritating matters in their interior.

Voracity as a disease has been noticed from the earliest times. The Greeks paid much attention to it, and gave it many names. They were, however, not very successful in its treatment. Galen recommends frequent and small doses of brandy. Little is known of the condition of the stomach in these cases. Dr. Mason Good thinks the disease is usually owing to some error in the structure or position of the stomach, by which means the food passes out of this organ as soon as it is introduced into it. In a case related by Ruysch the diameter of the pylorus was considerably enlarged from relaxation. Dr. Good says that in some instances the pylorus has been changed from its natural position to a more dependent one.

Drs. Hodgkin and Carswell both allude to a diminution of the human stomach. The former writer says, the stomach is sometimes much reduced in volume, in cases in which little has entered it for a considerable length of time. He connects its occurrence for the most part, with stricture of the œsophagus, or with a state of extreme irritability of the organ itself, allowing it to receive but little, and almost invariably and immediately rejecting that.

It admits of question whether this condition of the stomach should be styled atrophy or hypertrophy. There was a diminution in the size of the organ, and doubtless the weight was below the natural standard; still the walls of the stomach were thickened, and there was the reverse condition present, to inactivity of the organ. In the meantime I would propose to denominate the stomach in the morbid condition, "the small stomach."

It may not be out of place to notice a practice which prevails to a considerable extent amongst the lower classes in London, of mothers weaning their infants at a very tender age, for the purpose of suckling other infants. The mothers propose to make a little money, and for the sake of this the health of their offspring is injured. The bargain between the nurse and the friends of the child to be suckled, generally stipulates that the nurse's child is no longer to be applied to the breast.

The writer has not unfrequently seen

with pain, the infant of the nurse pining for want of the breast, and suffering materially from irritating food, while another infant occupying its place has been flourishing upon the milky formation. This practice may to a certain extent be a necessary evil, yet there is no doubt that the practice is of far wider range than the necessity, and it would, therefore, be well becoming in every practitioner to discountenance a practice which assuredly destroys many infants in the humbler ranks of society. It would be well to point out the coming evils to the parent, who is really often more ignorant than unfeeling. There can assuredly be few christian mothers who would willingly and knowingly sacrifice the health and welfare of their offspring, and be instrumental in their death, for the sake of a little money. It is true that poverty may urge. But in this land it is, or it is said to be, a principle that no man need die of hunger. We believe this sacred law to be part of our system, though doubtless occasionally infringed. Shall it then be tolerated that the tender babe shall be driven from its mother's breast, and thus starved, or poisoned by unsuitable diet? Let us discountenance the practice, and let us stigmatise the mother as the *Δυσμενής*, *Mater suo nomine indigna*, who would knowingly destroy her infant. Such poverty as could justify the destruction of a child's health can scarcely be supposed to exist. If it ever do exist, it has urgent claims for instant relief. However, the wrong is not confined to the humbler classes the higher ranks are a material party in the mischief. It is their gold, it is their love of pleasure, which forms the root of the evil. In a word, they should beware how they corrupt these placed beneath them, and use their means to the destruction of human virtue and the perpetration of injustice to helpless babes.

The treatment of the small stomach of infants consists in restoring the breast. If this is impracticable, from the sickness or death of the mother, or from inability to procure a substitute, the infant should be fed exclusively upon an imitation of the human milk, prepared by mixing equal quantities of cow milk and tepid water, with the addition of white sugar, in the proportion of 10 parts to the 100 of milk and

water. No other food whatever should be given, even though the child be twelve months old. When the child exceeds that age, the milk may be made stronger, and some arrow-root may be added.

Under the use of this imitation of human milk the writer has of late seen several children restored to perfect health who were fast running towards the grave by the too certain paths of diarrhoea, vomiting, irritable and angry mucous membranes, and the cramming of food on the part of parents; food which, even in health, they would have some difficulty in digesting.

Ossified Gall Bladder.

Mrs. E., æt. 79, died under my care, on the 28th February, 1844, of an attack of acute bronchitis on left side. The disease lasted eight days. The patient had been singularly healthy throughout life, had never suffered any symptoms of bilious disease, and was of very temperate habits. Two days after death the body was examined. The skin was of a lemon hue; nothing beyond a sallowness of the integuments had been noticed during life. The usual morbid appearances of bronchitis were found. With the exception of the gall bladder, the contents of the pelvis and abdomen presented their natural characters. The gall bladder was white or greyish, resembling fresh putty, hard and resisting to the touch. It was distended with fluid bile: the cystic duct was obstructed with solid cholesterine. The outer coat of the gall bladder was greatly thickened, and contained much phosphate of lime. The gall bladder was very firmly attached to the liver. No signs of inflammation, either old or recent, were discovered in the bladder itself, or in the surrounding structures. This case is not without some value as forming a contribution to the morbid anatomy of the gall bladder, and proving, as it does, that extensive ossification may occur independently of inflammatory action being manifested during life.

Hypertrophy of Heart; Ascites and Atrophy of Liver.

June 26, 1844.—J. W., æt. 61, cabinet-maker, of middle stature, well formed, of dissipated habits; has drank spirits to excess; has been exposed much to cold and wet; has suffered several attacks of

acute rheumatism: three years and a half ago became affected with palpitation and other symptoms of disease of the heart. He has been steadily becoming worse, and of late the abdomen has become the seat of effusion. The patient is very ill and in great distress; is compelled to sit up in bed in order to respire with some measure of freedom: the situs of heart cannot be made out distinctly on account of the great accumulation of fluid in the abdomen; the sounds of the heart are blowing and grating; there is no fremitus; catarrh; pulse is 120, weak, and feels as if the arteries were only partially filled: head is oppressed: digestion indifferent; stomach filled with flatus; veins are somewhat distended; no hæmorrhage: previous to heart affection lost blood by piles, but not since the accession of this disease: has never had jaundice, but the eyes have a green hue; stools reported to be generally pale, sometimes dark and scanty; urine scanty, and contains a little albumen. The abdomen unusually large; fluctuates freely; the liver cannot be felt.

To take squill and blue pill at night, and a mixture composed of Spirits of Nitric Ether, Tartrate of Potash, and Infusion of Broom-tops.

29th.—The patient died last night. The body was examined this evening.

Thorax.—The lungs were freely attached to the pleura costalis by old adhesions. The heart was adherent in front to the pericardium by adhesions requiring the scalpel for their division. The heart was greatly augmented in bulk; the walls were thickened and the cavities increased in dimension; its weight was 25 ounces (16 ounces to the lb.) The aortic valves were thickened; two of them contained bony deposit along their edges; they would neither shut nor open completely. The mitral, pulmonary, and tricuspid valves, were healthy. The cavities of the heart were filled with blood.

Abdomen.—The omentum was much shrunk, and had evidently been the seat of inflammation years ago. The liver was much atrophied, and was retracted and hidden under the false ribs. It weighed two pounds nine ounces. The exterior was perfectly white, and resembled wet parchment or dressed sheep's skin. The white appearance arose from the peritoneal

covering being greatly thickened, being nearly a line in thickness: the thickened peritoneal covering was readily torn from the proper liver structure: the liver structure was rather harder than natural, and presented a little of the nutmeg character. The gentleman who conducted the dissection searched for the gall bladder, but not finding it, concluded that it was absent: there was certainly no gall bladder to be seen, but it was suggested to him to cut down across the usual site of that organ: this was done, and the gall bladder, tightly bound down by the thickened peritoneal covering, was discovered. It contained no bile. The kidneys were, with the following exception, of the natural size, consistence, and colour: the right kidney presented on its posterior aspect a tumor about the size of a pigeon's egg, containing purulent matter. The investing membrane of the spleen was greatly thickened, and appeared to have compressed the contained viscus, which was unnaturally firm. The fluid in the abdomen amounted to several gallons, and contained much albumen.

The reduced bulk of the liver forms a prominent object in this case, and contrasts well with the greatly enlarged hydatid liver, which the writer described in a late number of the LONDON MEDICAL GAZETTE. So small, and retracted under the false ribs, was the liver, that it was not immediately recognised upon opening the abdomen. The absolutely white colour of the organ formed another striking feature. The internal structure of the liver presented nothing more than signs of congestion and wasting: there were to be seen no granular deposits. The surface of liver was perfectly smooth, and in every part destitute of any approach to the rough and tuberculated condition found in cirrhosis. The morbid condition of the biliary organ depended entirely upon thickening and contraction of the investing membrane, consequent upon antecedent inflammation, probably of a subacute character. This view of the case is supported by the atrophied or shrunk condition of the omentum and other parts of the peritoneal membrane.

Thickening of the serous membranes has been pointed out by several morbid anatomists. Craigie regards this as a result of inflammation, but Liennec

denies its existence. The liver has not unfrequently been found to be invested by a thick membrane, but while it appears that some have regarded this as the thickened peritoneal covering, others amongst whom are Carswell, have regarded it as an adventitious false membrane. The investing membrane in the above case was certainly the peritoneal covering in a state of thickening. Dr. Roots has in the sixth volume of Guy's Hospital Reports, related a case in which the peritoneal covering of the liver was in a state of thickening.

The apparent absence of the gall bladder is worthy of notice. The peritoneal covering of that receptacle, like that of the liver itself, having been the seat of inflammatory action, probably of a subacute character and of long duration, underwent a process of thickening and of subsequent contraction, and effectually bound down the invested bladder so as to efface all appearance of it. Had not the transverse incision been made, the cyst would not have been found, and it would have been concluded that no gall bladder was present. Perhaps the gall bladder existed in a similar condition in some of the recorded cases of alleged absence of this appendage of the liver.

Dr. Carswell says, that in cases of false membrane in the abdomen, the gall-bladder is contracted and nearly empty. In Dr. Roots' case, above alluded to, the gall-bladder was reduced in size, and contained bile. But none of the writers above referred to mention the gall-bladder as ever so completely bound down by false membrane or by the thickened peritoneal covering, as it was in the present case.

48, Gower Street, Oct. 18, 1844.

POINTS OF PRACTICE.

To the Editor of the Medical Gazette.

SIR,

THE signal profusion of modern medical literature makes the courage to be ignorant of a great deal absolutely necessary if we would know any thing thoroughly. Many active and zealous practitioners abandon in despair all hope of keeping pace with the press, and, annoyed at the general disposition to take nothing for granted, confine themselves to the quantum of science with which they

began their professional career, and are only anxious to accumulate "bits of practice." They are probably in the right. When a man is once well employed as a general practitioner, he has neither leisure nor inclination to investigate first principles. He must *act*; and the communication of a new and efficient mode of treating a common and well known disease is of vastly more importance to him than the most learned and philosophical treatise on the functions of nerves or the composition of the blood. "Give me a good bit of practice, and I will thank you for it, but I have no time for scientific researches," has been often said to me by a country practitioner who, by dint of close observation and natural sagacity, has made himself a very valuable instrument of good to his fellow creatures. He can cure disease, though he cannot talk about it.

Bearing this in mind, I propose, with your permission, to communicate, from time to time, some of the results of forty years' close observation of disease in several countries of Europe. I will confine myself solely to subjects that I have thoroughly ascertained, and leave all speculations to the young. They are useful as exercises of the mental powers even when they lead to no result; but a man may be very right in his practice without being able to give reasons for it. I will call my contributions POINTS OF PRACTICE; and the first shall be on a not uncommon, but a very embarrassing form of dyspepsia, of which I can find no mention by any writer. The cure is easy, or I should not think a notice of the malady worth communicating.

1. A Form of Dyspepsia.

It begins with the usual symptoms of flatulence and sense of oppression after eating — *almost immediately* after a full meal, by which it is to be distinguished from defective digestion in the duodenum. There is no headache.

It affects almost exclusively those who neglect proper exercise, and indulge in pastry and dishes that are fried. As it advances, the distress produced is excessive; there is a sense of constriction at the pit of the stomach and at the sides of the neck; and if the patient move soon after a meal, he readily regurgitates the food he has eaten — not with a sensation of sickness,

but in the mode we see in ruminating animals. Any attempt to prevent this gives pain; but if he walk briskly up hill, or up stairs, for ten minutes or a quarter of an hour, he gradually rejects two-thirds of his dinner, and is then perfectly well.

When he allows the food to remain, there comes on, in the further progress of the case, symptoms exceedingly like angina pectoris. There is an intermitting pulse; pain in the sternum, which becomes exceedingly tender to the touch, and a general feeling of lassitude; with an aching of the arms similar to that which arises after taking opium. Eructations are frequent and excessive, after each of which the pulse immediately becomes regular, and there is an universal sensation of uneasiness which it is impossible to describe. There is also a feeling in the throat like the globus hystericus.

An immense variety of symptoms will immediately suggest themselves when the cause of this annoying malady is stated. It is the accumulation of food in the œsophagus, which will sometimes take place to an enormous extent. It arises from defective power in the œsophageal plexus of nerves, and also from a constriction of the orifice in the diaphragm, or from a combination of both. It would make too long a communication to detail the mode in which I ascertained this; but of the fact I am certain. Each mouthful of food is mechanically driven down by that which follows it. At the beginning some goes into the stomach; but the power of deglutition seems to last only a certain number of minutes, and to be exhausted long before the appetite is satisfied. The food which remains in the œsophagus, not being subjected to the vital action of digestion, takes on the chemical action of fermentation; and we may easily conceive the effect of a large foreign substance, and the gases thus generated, occupying the space which should be devoted to the lungs and heart. That portion of the œsophagus which is under the influence of volition performs its proper functions; but the involuntary portion seems to remain a mere flaccid tube, incapable of taking up its duties. Many hours will elapse in this distressing state; and the food, when rejected, is perfectly unchanged.

The remedy is obvious. Eat fre-

quently, and in very small quantities at a time; use very active exercise; and undergo an occasional fast of twelve or fifteen hours. Wait some hours after rising before the breakfast is eaten; and in very aggravated cases let the food be a kind of rich panada, made of a very strong decoction of lean meat and crust of bread. Avoid all fried things; take weak cold spirit and water rather than beer or wine; use cayenne pepper freely; keep the bowels open by warm laxatives, as the *beanne de vie*; and, above all, give way always to the desire of regurgitation; promote it by violent exercise, and never let the œsophagus be distended if it can possibly be avoided. When the sense of oppression is entirely gone, a basin of warm tea (not weak) will be of great service; and if, in spite of advice, the patient will occasionally indulge in a hearty meal, let him bear in mind that he must begin again *de novo*. The dilatation of the tube can only be overcome by a steady perseverance in the plan, and one excess puts him back to the point he started from.

It does not appear that the stomach often partakes of the disturbance: digestion is perfect, and there is every appearance in the evacuations that all the other functions of the body are in order.

The danger is, that when seen for the first time it should be considered as disease of the heart,—ossification, or angina pectoris. The practitioner may easily commit himself by a premature opinion.

There is no kind of exercise so well adapted to the disorder as the game of tennis; but this is accessible to few. Fives or racket would be a good substitute.

A. L. WIGAN, M.D.

CONTRIBUTIONS TO HYGIENE, WITH PARTICULAR REFERENCE TO THE SOLDIER.

[Continued from p. 113.]

MILITARY HYGIENE.

Punishments; their Moral and Physical Effects.

IN practice, the principal duty of a medical officer upon a punishment parade, is to prevent the delinquent from successfully feigning a disability, for

the purpose of escaping corporal infliction.

Flogging is, by a small minority of officers, believed to be neither beneficial in reforming delinquents, nor in effectually warning others from committing breaches of discipline; indeed, in their opinion, excess of punishment seems to promote the commission of offences. Mr. Harriott, who was for some time Judge Advocate in the Madras Presidency, relates a case where punishment was obviously injurious. "Private King," says our author, "who was a good clerk, and a clean smart soldier, had been repeatedly promoted, and as often reduced in consequence of intemperate habits. When sober, he was a pattern to the regiment for excellent behaviour and exemplary conduct. Repeated punishment rendered him insensible to shame, and hardened his disposition against reformation. On one occasion he received 150 lashes; and to prove his hardihood, he held the halberds without being tied up, and received the punishment without flinching. The commanding officer, who had only recently joined the regiment, addressed the men, in a pathetic soldier-like manner, on the subject of crimes and punishments; by which the whole parade became deeply affected. King, whose back was streaming with blood, folded his arms across his breast, and listening, apparently with ease and composure, until the address was finished, coolly asked the commanding officer how many lashes he thought he (King) might have received since he had the honour of serving the Company? 'Too many,' replied the Major, 'I fear, to have done you any good.' Continuing in the same position, King replied, 'I have had the honour to receive just 950; and if you please, Major, I will take another 50 now, just to make the score even, and let it stand to the next account.'

"Both officers and men stood aghast at this breach of military decorum. He was forthwith ordered to the hospital, with an assurance, that should he again subject himself to the sentence of a court martial, means would be taken to punish him more effectually. King's subsequent fate deserves to be mentioned. In a short time he was brought to trial for drunkenness, disobedience, and striking an officer. He was found guilty; and it was generally expected

that his punishment would be extremely severe. The sentence, however, was to receive 50 lashes only, but on his breech like a boy. King was so affected at the thought of being thus disgraced, that he was taken ill, and sent to hospital, where he remained several months. It was indeed, the general opinion, that he would have continued there until he died; but it so happened, that a man was sentenced to be shot, and on these occasions it was usual to make a request through the medium of the Judge Advocate, for the pardon of prisoners confined or sentenced for minor offences. By this means King was pardoned. He left the hospital in a day or two, and subsequently behaved so well, that in a few months he was promoted to a halberd, and had long the credit of being one of the best serjeants in the army."

It is contended by a majority of military officers, that the severity which characterises our military enactments and usages is essential to that degree of subordination which should prevail in the British army, while not a few entertain a contrary opinion. The arbitrary powers placed in the hands of officers are, it must be admitted, often greatly abused; and to those who look beneath the surface of things, it will be obvious that the stern and rigorous rules of military discipline are frequently partial in their operation. There is a large amount of silent but undeserved suffering in an army, the individuals of which may neither have the right to complain of, nor the power to resist, the harsh treatment to which they are subjected. An example illustrative of the truth of this observation may be given.

It is customary in the army to perform the barrack-room fatigue duty in rotation; and it is part of that duty to carry the messes from the cooking-house to the rooms; for this purpose, the orderlies, as they are called, fall in, and are marched, under the command of a non-commissioned officer, to the cooking-house, a few minutes before the bugle sounds for dinner. It happened in the — regiment of Dragoons, while serving in India, that on the orderly men falling in one day, previous to marching off for fatigue duty, a private dragoon, named Kennedy, was reported absent; a moment after, he made his

appearance, and stated he was going to wash his hands at the pump at the rear of the barracks,—not more than a few yards distant,—when he would return and join the party. “Fall in immediately, sir!” shouted the corporal, a tyrant in his petty way. “When I have washed my hands,” replied Kennedy, as he ran to perform his ablution. This was all that passed on the occasion. The vindictive corporal immediately placed him under arrest, and a court martial having been called next day, to investigate the charge, Kennedy was found guilty of a breach of discipline, and sentenced to receive 300 lashes, which were duly administered in the riding-school, in the presence of the assembled regiment. The commanding officer of the corps concluded a long address to the men, with the following remarkable observations:—“And now, sir, I have long waited for this opportunity of teaching you better manners, and a proper respect for military authority. You are well known as an old, and I fear incorrigible offender, and are sufficient to spoil the younger soldiers in the regiment, by your example. I will teach you, and all who hear me, that fatigue is a duty, and a very important one too. I trust this will be a warning that you will recollect to the last hour of your existence. Take him down.”—(*Life in the Ranks*, p. 188. London, 1843.)

How far such a punishment was required, or calculated to prevent military delinquencies, I leave my readers to judge. “Respect for authority can only be ensured by convincing those in subordinate situations that it is exercised with impartiality and discretion.”

The manner or conduct of some commanding officers, on a punishment parade, differs materially from that of others; and the same may be said of delinquents. Colonel —, where he commanded the — regiment in the West Indies, used to occupy a chair in the middle of the square, when he superintended the infliction of the cat. He had, it must be admitted, some apology for adopting so unmilitary an expedient; for, while he commanded, there were frequently from ten to fourteen men punished at one parade. The magistrates in Holland superintend, I believe, all punishments, sitting in solemn pomp close to the place where

the delinquent is undergoing the infliction to which he has been sentenced. This used, I know, to be the practice at the Cape of Good Hope. Some men do not complain while they are undergoing punishment; others complain much, and beg to be “taken down,” from the time they receive the first lash.

There are some who convert the infliction into a source of amusement, by the discordancy of their remarks with the pain they are obviously enduring. “An Irish dragoon who was brought to the triangles, not only bore the lash without wincing, but between each round administered by successive operators, was ready with some absurd remark, which converted the whole scene into a farce rather than example, neither officers nor men being able to preserve their gravity. Amongst other things he had the assurance to tell his commanding officer, ‘that he might release him, as he had now been thrashed to his satisfaction.’ He, however, reserved his best stroke for the last; for as they were casting him off from the triangles, he turned round, and with a countenance in which fun and suffering were ludicrously blended, exclaimed, ‘Ah, you may talk of tobacco, but this is the real twist.’”—(*Life in the Ranks*.)

An example of another kind may be stated. A Captain T—, of — regiment, had a *chère amie* in his barrack-room, and one evening, while he was at mess, the sentry on the officer’s quarters, seeing no immediate probability of his attention being occupied in the way of duty, pulled off his boots, and leaving them with his musket in the sentry-box, proceeded softly to visit the said *chère amie*; but, unfortunately for him, Captain T. left the mess at an unusually early hour that evening, and found the sentry in his room. The sentry was tried by a court martial for leaving his post, and sentenced to be flogged. When he had received about one-half of his sentence, he called out most lustily, “O take me down, colonel, take me down, and give the rest of the lashes to Captain T.; he is as much to blame as I am; for if he had not kept that woman in his room, I would never have left my post.”

Medical officers should be particularly cautious in regard to persons suspected of fraudulently feigning disabilities. By

the articles of war, "any soldier who shall be convicted of malingering, feigning, or producing disease or infirmity," shall "be liable, in addition to corporal punishment," to any other punishment which the court may be competent to award. Medical officers are doubly responsible in cases of suspected malingering: in the first place, because it is usually upon their evidence that a soldier is convicted; and secondly, inasmuch as they are required to certify that he is fit to undergo punishment. Medical evidence, in regard to malingering, has seldom any better foundation than inference or presumption; and however improbable the allegations of a man may appear, some doubt will generally enter into the mind of a medical officer in regard to the existence, in a greater or less degree, of the alleged disability, of which doubt the accused should have the benefit. A medical officer may certify that a soldier is, in his opinion, fit for duty, although it is believed he will rarely consider himself warranted to swear that a man is not suffering more or less under physical or mental disease,—real or imaginary. Colonel Campbell, in his "*Excursions, &c.*" gives the following account of the flogging of a suspected malingerer on board a transport, which will shew how the articles of war and the usages of the army were administered.

"Darby Star, a clean, regular, good-looking soldier, was suspected of being rather *shy*, and tried by a court martial for feigning disease. It appears that the principal witnesses for the prosecution were the surgeon and his hospital sergeant. Darby was sentenced to receive 500 lashes, and tied up to the grating at the gangway of the ship, and had 50 lashes inflicted upon him in an amazing short space of time. 'Stop,' said his stern commander; 'will you, Darby Star, confess that you are a malingerer?' Darby was speechless. 'Go on;' and the drum-major was told to see that the drummers did their duty. He received 25 lashes more. 'Stop, will you now confess?' In a very weak voice Darby protested that he was as innocent as the child unborn. 'Take him down.' But all present were told to mark their commanding officer's words; and they well knew his word was never broken. 'You, master Darby Star, shall every Monday morning receive 50 of the 500 lashes to

which you are sentenced, until you acknowledge you are a malingerer.'"

[This address resembles in some respects the spirit of a torture warrant of the sixteenth century, of which the following are two specimens. Shortly after the accession of Queen Elizabeth, the privy council directed two prisoners to be examined; and if the men should persist in denying the fact, they were "to be brought to the rack and to feel the smart thereof, as the examiners, by their discretions, shall think good for the better *haulting* out of the truth of the matter." In 1565 a letter was addressed by the council "to Lord Scrope, directing him to deal *somewhat sharply* with Nicholas Heath, to the end that he should declare why he wandereth abroad, and if he will not be plain, to use some kind of torture toward him, so it be without any great bodily hurt.]"

"Next Monday came: Darby was almost carried up from below, with scarcely an appearance of life in him, his back by no means healed, from the effects of the punishment he had received. Without further ceremony, he was again fastened to the grating. 'Drummers, do your duty,' sounded in Darby's terrified ears. I confess I really pitied him; his appearance deceived me; and I knew not what to think. Colonel D——, however, stood determined to go through what he had begun. During the infliction of 25 more of the lashes, which I noted with an unsteady hand, (Colonel Campbell, the narrator, being the adjutant of the corps,) Darby called out, in an astonishingly loud voice for so sickly-looking a wretch, that he would confess anything in the wide world if he would only be forgiven. 'Stop! you confess yourself, then, to have been all along a malingerer?' 'O yes!' groaned Darby. 'Speak out, sir, so that all on board may hear you distinctly.' 'O yes, yes,' roared Darby. 'Take him down. Now, sir, you must convince every one present that you are quite recovered; and to shew that you really are so, you must, as an old dancing-master, instantly give us a jig.' A drummer and fifer were ordered to be in readiness to play a tune; and as soon as he was dressed, Darby got on with his jig in first-rate style."

The proof of imposture in this case depends on the same fallacy which attends any confession that may be

extorted by the rack. Evidence thus obtained is a deceitful and dangerous instrument; for many persons will tell any kind of falsehood rather than undergo the torture. Besides, it should be recollected, that every healthy man who alleges that he is sick, is not an impostor; he may with all honesty believe that he is suffering under disease, and unable for duty. Shortly before the revolution of 1793, the parliament of Paris suspended two judges from their office, who had ordered the execution of a man for the alleged murder of a woman, proved only by his own confession under torture,—the woman being discovered alive within two years after the execution of the supposed murderer.

Instead of bringing an alleged malingerer at once before a court-martial, I think, with Dr. Cheyne, that a medical board, consisting of at least three medical officers of mature experience, would be found the better tribunal in the first instance, and upon their decision the ultimate measures should be grounded. It is easy to infer and to allege, that a soldier is fraudulently feigning a disability; but it is frequently very difficult to prove satisfactorily that he is not more or less affected with disease or disability. No person should be convicted of the crime of malingering unless it be very satisfactorily established by skilful and impartial testimony. A medical officer who has had the care of an alleged malingerer, and who has reported him to his commanding officer, may have so far identified himself with the accusation, as to be somewhat biassed in his opinion of the case; and consequently a court-martial will be required to estimate the weight of his testimony, according to what they may deem its real value. I repeat my opinion, that no man should be punished for a delinquency so difficult to appreciate as feigning a disability, but upon the testimony of two competent and impartial witnesses.

Numerous examples might be adduced to shew the caution which should be observed before a medical officer certifies that a man is in sound health, and fit to receive corporal punishment. In a regiment of native infantry (India) a tent-pitcher was the bearer of a note from the adjutant to the medical officer, a young man, stating that he wrote at

the request of the commanding officer, who, as well as himself, was convinced that the man was feigning disability in order to evade duty; that they sent the man to be examined, and if he (the medical officer) should be of the same opinion, the tent-pitcher was to be forthwith flogged. The man was a strong, hale, stout-looking fellow, but with a somewhat heavy expression of countenance. He complained merely of headache, and feeling languid,—and looked the picture of health; his tongue was clean, his skin was cool, but his pulse was a little lower than the average. The medical officer wisely decided that further inquiry was necessary, and the adjutant was informed that the man was not well. He died during the night, probably from apoplexy. Medical officers are well aware that serious disease may be impending, without being indicated by any external character which they are able to recognize and appreciate; and men who appear stout and well may be very ill, although they cannot state their cases clearly.—(*Medico-Chirurgical Review*, No. 79, p. 75.)

Ignominious punishments were formerly much employed, both in civil life and in the army; and among this class of punishments, the wooden horse was chiefly used in punishing soldiers. According to Grose, the wooden horse was formed of planks eight or nine feet long, laid together so as to form a sharp ride or angle. When soldiers were sentenced to ride the wooden horse, they were placed on the back with their hands tied behind them; and to increase the punishment, muskets were tied to their legs. There appears, however, to have been some variety in the mode of infliction, as may be seen by the following extract from Knox's *Historical Journal of the Campaigns in North America in the years 1757—1760*. "Yesterday a court-martial sat on a grenadier, for absenting his command when attacked by the enemy: he was found guilty of cowardice, and I think," says our author, "the particular punishment ordered for him evinces great discernment in the members of the court. Their sentence ran thus. It is the opinion of this court, that the prisoner is a notorious coward, and they sentence him to ride the wooden horse half an hour every day for six days, with a petticoat on him, a broom in his hand,

and a paper pinned on his back, bearing this inscription, 'Such is the reward of my merit;' which sentence was duly executed." (Vol. i. p. 96.)

This man conducted himself, on many subsequent conflicts with the enemy, in a manner equal in courage to the bravest of the army. Few persons are, I believe, at all times equally disposed either to attack or resist an enemy; and it may be doubted whether a coward was ever made a brave man by disgracing him. Perhaps, however, alleged cowards are punished as an example, for the purpose of rendering men more afraid of the triangles than of the enemy, and hence an attempt is made to excite courage by the passion of fear.

The Chinese adopt this plan to prevent cowardice. Among many other duties of a Chinese soldier in warfare, it is ordered that "he who wears the drum and does not advance, or who hears the gong and does not retire, shall suffer the same punishment. Strict adherence to the severities of martial law is the only way to make brave men of cowards."

Sound policy, honesty, and humanity, will it is hoped eventually lead to an alleviation of the punishments in the army. The severe punishments and harsh usages of soldiers are the results of old causes; and our generation has the honour of contributing to their improvement, while the disgrace of their existence belongs to a former state of society. We see the progress of melioration silent but sure in the army; by which means more beneficial effects will be produced than are generally anticipated*. Attention to cleanliness,

* Several examples might be stated of the abolition of severe and impolitic laws and usages in the army, owing, probably, to the meliorating influence of civilization and social improvement. For the alleged purpose of repressing immorality it was at one time a rule in the army to fine every soldier who had the misfortune to be affected with the venereal disease. A man who was infected with one grade of the disease was obliged to pay half a guinea, and for another grade he paid five shillings. The surgeon of the regiment was the informer, the judge, and the receiver-general. By the civil laws of the country, an informer, I believe, never receives above one half of a fine which is levied in consequence of his information; but in this example of military law, the surgeon pocketed the whole, and from his judgment there was no appeal. It is obvious that by this impolitic law a surgeon would be frequently led into temptation, his interest and the principles of humanity and common sense being often at great variance. Soldiers, as might be expected, did every thing in their power to evade the summary jurisdiction of the surgeon,

and an ample supply of nutritious food, will contribute greatly to preserve the health of soldiers; but humane treatment is of immense importance in preventing disease in an army; so much so, that the saying is not far from truth, that a kind captain has generally a healthy company.

As a proof of the beneficial influence of civilization, I may state, that on the 1st of May 1844, the Emperor of Russia "issued an ukase, in which (as already in the Imperial Guards), the bastinado is prohibited in the whole army, except in cases of extraordinary criminality, and that in such cases the punishment is not, as was formerly the common practice, to be inflicted at the direction of the colonel of the regiment, but by virtue of a sentence pronounced by a court-martial. Those persons who act against these orders are to be severely punished."

It is also alleged, that the King of Prussia has wisely and mercifully determined on the abolition of flogging in his dominions; and there can be no doubt, that in proportion to the justice and respect with which he treats his soldiers, they will become attached to his service, and worthy of serving him, for he will govern men, and not slaves; he will himself, by this act, reap honour not only for a deed of justice and humanity, but for the elevation of the character and morals both of men and officers.

In 1832, an excellent project for a new criminal law was published in Sweden. The enlightened authors of this proposal observe: "The experience of all periods and of all countries shews, that extremely severe punishments harden instead of deterring." In accordance with a humane view of the object and nature of punishment, the committee have abolished flogging, which, "as being of short

whose fine or punishment was a much dreaded penalty. Half a guinea, or even five shillings, was a great sum to a man whose income varied from three to four shillings a week. Many army surgeons recovered this odious assessment with much pain. The experience of many years demonstrated that the remedy was not calculated to check the immorality it was intended to prevent; indeed, in many instances the fine was found to be productive of much individual distress, and an aggravation of the disabilities of soldiers. This regulation was in full operation as late as 1795, but at what period it was abolished I do not exactly know. A similar rule obtained in the Navy, but it had been abolished before that date.

duration, is, for the individual already morally corrupted, less deterring than other kinds of punishment. In him, on the other hand, whose feeling of human dignity is not already smothered, this debasing punishment crushes those dispositions for improvement which are founded in human nature, and brings him to despair." All other degrading punishments—as penance, pillory, and stocks, are also excluded from the project, “as not conducive to the improvement of the criminal, and likewise failing to awaken in others a warning and an aversion for crime.” Frequent and severe punishments have a decidedly bad effect, in some instances by lacerating the feelings, and in others by hardening the minds of spectators.

RECORD OF CASES.

By THOMAS MAYO, M.D. F.R.S.

Physician to the Infirmary of St. Marylebone.

[Continued from p. 18.]

(For the Medical Gazette.)

On Bleeding in Cases of Congestion.

No one of our remedies is at once so uncertain, and at the same time so important in its effects, as, in a certain class of cases, the removal of blood.

The class of cases, to which I here allude, are such as it is usual to refer to what is called congestion. To systematise the groups of symptoms by which these cases are characterised, in reference to treatment, would be premature. They occur in very different illnesses, and start up occasionally under circumstances to which no nosological place has been assigned. It has, indeed, appeared to me, that the most effectual way of rendering them instructive in respect to therapeutics, would be to collect and enumerate them. This operation must precede any attempt at more philosophical views.

I shall here adduce three cases of successful depletion, where the congestion had been cerebral; and although at present I have to do with nothing except facts, I cannot neglect the opportunity here offered, of expressing my thankfulness to Dr. George Burrows, as having removed the theoretical difficulties opposed to the reception of such facts by the supposed views of

Dr. Kellie, and their real acceptance by Dr. Abercrombie and others. We are indebted to Dr. Burrows for informing us, that in the presumed absence of atmospheric pressure on the contents of the cranium, it is not a plenum in respect to its contained blood; and that we need not, in our speculations, limit the effects of depletion to the altering the *relative* quantities of arterial and venous blood therein contained.

In June, 1828, I was sent for early in the morning to the Hon. Mrs. P., a lady aged 50, apparently of a nervous temperament, and of a habit neither full nor spare. She was described as subject to head attacks, which were sometimes relieved by stimulants, but in their severer forms requiring depletion. She had the preceding night been much frightened by the sudden death of a servant. Severe pain about the vertex came on, and gradually increased in the course of the night to a very excruciating degree, accompanied by a sense of weight and by sickness. When I saw her she complained of these sensations, and of extreme coldness, which appeared to be creeping and increasing on her. The pulse was small, the visage contracted; the legs and thighs moved spasmodically.

I first relieved her, and somewhat lessened the coldness, by a little brandy and water. Then, as the other symptoms were rather increasing than diminishing, I directed that fourteen ounces of blood should be taken. The blood at first flowed unwillingly, afterwards more freely; and when this began she expressed a sense of diminished pain and returning warmth. Soon afterwards, the spasms and pain somewhat returning, I allowed about eight ounces more to flow. All the symptoms were from this moment relieved. In the course of the afternoon the action of an aperient, which I had given, occasioned syncope, and was followed by severe hysterical symptoms. In about thirty-six hours from the time at which I first saw her, she was perfectly well.

The following case I give in the words of the assistant resident practitioner at the Marylebone Infirmary:—“I was sent for on the night of the 11th of November, to Joseph Taylor, in the workhouse. I found him quite insensible; pupils much contracted;

pulse about 60, and very low; the extremities cold. The right side of the body was affected by convulsive movements, which occurred at intervals of three or four minutes, and lasted the same length of time; the left side was unaffected. I could not easily ascertain how long he had been in that state. For the last two or three days he had been complaining to those around him of a pain in the head. I gave directions for his removal to the infirmary. When he arrived there he was in a state of partial collapse; the face and extremities of a pallid blue colour; the pupils still contracted, and insensible to light; the contractions of the limbs were recurring with much force. As he appeared a strong muscular man, a vein was opened. The pulse, which I have described as low and feeble, improving under this measure, the bleeding was continued, until he had lost about fifty ounces, a considerable quantity being also spilt on the floor in consequence of the spasms, on which this loss of blood seemed to take no effect. As soon as the pulse began to give way the vein was closed. The symptoms continued, however, in every respect the same, except that the natural heat of the body had been in some degree restored. Recourse was then had to cupping on the temples. When he had lost about six ounces (*when the brain was depleted*), the convulsions suddenly ceased, and the pupils began to dilate and contract irregularly. In a short time he started up in bed, endeavoured to mutter something, and looked about him in a bewildered way. The cupping was continued until he had lost twenty ounces; he was then sensible, but could not give a collected answer."

These symptoms did not recur. The patient was brought under the influence of mercury by one of my colleagues, whose patient he was, and in the space of a month had entirely recovered.

This man, I ought to observe, had recently lived well, and drunk rather freely.

Thomas Jenkins was admitted during my week into the Marylebone Infirmary, as a fever case, of which his appearance gave every warrant. His visage was contracted; prostration considerable; tongue coated, brown, and dry. The breathing slightly accel-

erated, with some ronehus on both sides; but there was little heat of skin, and the pulse was oppressed, and did not exceed sixty. The bowels were soft and pliant, and described as open; the urine plentiful, but scalding. He also complained of heaviness and pulsation at the occiput, and the right hypochondriac region was tender on pressure. He wandered slightly in talk. As far as I could learn, he had been ill about forty-eight hours. I was induced mainly by the state of his pulse, as being inconsistent with simple fever, to direct the removal of eight ounces of blood from the nucha by cupping.

Sumat Hydrarg. Chlorid. gr. ij.; Opii, gr. 4, 6tis.

5th.—He had slept well, and was less delirious, being much relieved by the cupping. I now learn from him, that he fell down in the street insensible yesterday, but promptly came to himself. Occiput still very hot; pulse 48. The bowels have not acted.

Sumat Pulv. Hyd. Chlorid. c. Jalap. gr. xv. statim.

6th.—Much better; bowels have acted freely; pulse 54.

Perstet in usu Pil. Hyd. Chlorid. c. Opii.

7th.—Mouth affected. Some heaviness of occiput was now again complained of; but his tongue was moist and cleaner, his bowels open, and his general appearance much improved. I ordered him a more generous diet, namely, daily meat, he having had only beef-tea before. This change agreed, and the heaviness of head subsided. By the 14th of May he was well. His pulse had become 70.

In the above three cases blood was successfully removed, on a hypothesis of cerebral congestion. In the following case it was *unsuccessfully* removed, on a similar hypothesis, which turned out on subsequent inquiries to have been delusive.

Frances Page, a well-grown and healthily constituted infant, was brought into the infirmary September 27, 1844. She had passed out of an attack of measles three weeks before, and had since laboured under cough. The breathing, though not distressed, is uniformly short and quick; the aspect dull; the eye glassy; there is no evidence of pain or fever. In this state of symptoms she remained to the

6th of October. In the course of this time three leeches were once applied to the sternum: they bled freely, and relieved a slight increase of hurried respiration, which had occurred; also one Emplast. Lyttæ. In the greater part of the time Pulv. Hyd. Chlorid. c. Antim. Pulv. Conii C. aa. gr. ij. were given 8vis.

My object was to produce resolution of a state of hepatised lung, which had probably supervened, though I failed to authenticate this by auscultation or percussion, from unwillingness to expose the infant. The fact itself was, however, of the most common occurrence in those infants in the infirmary, in whom catarrh had succeeded measles, unless instantly removed.

On the 8th some pyrexia was observed, and about that time she was first heard to hoop by the nurse. The breathing was not altered; she was constantly sleeping, or irritable during her short intervals of waking.

Hirudines ij. sterno. Pt. in usu pulv. supra præscript. 4tis horis.
10th.—Emp. Lyttæ nuchæ. Pulv. 8vis.

11th.—Thoracic symptoms much the same; abdomen distended; restlessness.

Misturæ Assafoetida, ʒiv. pro enemate.
Pt. in pulv. bis quotidie.

14th.—A second enema thrown up yesterday; on each occasion restlessness quieted. The hooping is now frequent.

15th.—The fixed pupils and comatose aspect of countenance, induced me to apply a single leech to the temple. From this very free bleeding took place, with immediate convulsions and additional coma, continuing till death, which occurred at noon of the 16th.

Post-mortem.—Brain large and firm; convulsions unusually deep; no effusion in ventricles, general character rather exsanguine, but not abnormal in any other point.

Greater part of both lungs non-crepitant, of a nutmeg colour, generally softer than the usual character of hepatization; but detached lobules sinking in water. Pleura opaque, and with a remarkably soapy feel on being handled; no fluid or coagulable lymph in either cavity.

A large white polypus in the left ventricle of the heart, which was other-

wise normal; as were all the viscera of the abdomen.

In this case it may be conjectured, that the cerebral phenomena observed by me during life resulted from an imperfect supply of blood, itself in an imperfect state; and that the abstraction of a part of this supply occasioned the fatal train of cerebral symptoms which then set in.

I shall take leave for the present of this interesting subject with the following extract from the posthumous writings of Dr. Parry, of Bath, with which my own experience coincides, in its yet more extended application to bleeding in cerebral congestion.

"Difference of effect between small and large bleedings in hemiplegia.—When Dr. H., who was above 70 years of age, was seized with hemiplegia, in which he totally lost the voluntary power of his arm and leg, I ordered him to be cupped. This was done only a few hours after the seizure. While the operation was performing, when only four ounces of blood had flowed, the power of voluntary motion in his limbs returned; but again vanished by the time ten ounces had been taken away*."

The lesson, however, here conveyed must be read with caution, in regard to the inference which it may appear to warrant.

[To be continued.]

CASE OF PECTORAL DISEASE.

To the Editor of the Medical Gazette.

SIR,

I SEND the following case, imperfect as it is, because it presents some points of interest connected with the diagnosis of pectoral disease, which I think may render it worthy a place in your pages.

I am, sir,

Your obedient servant,

T. OGIER WARD, M.D. Oxon.

21, Lower Phillimore Place, Kensington,
Oct. 15, 1844.

J. N., æt. 59, postman: has drunk freely, chiefly of ale, when a young man, though latterly he has been abstemious. For many years he has had palpitations, with cough, dyspnœa, and inability to lie on the left side from

* Medical Writings of the late C. H. Parry. Vol. i. page 474.

pain in the region of the heart, unless his fist was doubled under him at that part. About four years ago, he was first laid up, and since that time his attacks have increased in frequency, severity, and duration, till the last, which proved fatal in thirteen weeks. He came under my care a year and a half ago, when he complained of cough with white viscid and frothy expectoration, dyspnœa, aggravated by going up hill, and being out in cold and foggy weather; pain under lower ribs of left side, increased by a full inspiration; part tender to pressure; violent palpitation of heart, consisting of tumultuous repetitions of the first sound, with pretty strong impulse and bellows murmur to left of sternum, but this was not always audible; extensive dullness over præcordial space; and the action of the heart visible in epigastrium and left hypochondrium; dullness, but not great, over painful portion of left side, with moist crepitation in the same part, and mucous rattle for a small space above; respiratory murmur clear in front and over right side of chest, except during some violent attacks, when there were mucous rattles at back and lower part of right lung. The moist crepitation was permanent on the left side, even where there was no morbid pulmonary affection. Pulse very weak and irregular, not so frequent as the impulse and ventricular sounds, and the weakness of the pulse always increased with the urgency of the dyspnœa and other symptoms. No regurgitation along jugular veins. Considerable fulness of epigastrium and right hypochondrium from enlarged liver. Tongue usually pretty clean, but during attacks coated over with a thick pellicle, peeling off in patches as the attack subsided; appetite bad, with thirst and some fever; œdema of the ankles; urine variable in colour and quantity during attacks, but latterly containing some albumen.

The treatment that suited him best consisted of occasional leeching and blistering affected side, mild purgatives chiefly saline, and saline diuretics with digitalis and a gentle narcotic. He could not bear strong depletion of any kind.

In the last attack, in addition to the symptoms above mentioned, there was jaundice, orthopnœa, enormous œdema of the legs and thighs with phlyctenæ; dullness of præcordium much extended,

with great enlargement of liver, forming a hard projecting tumor in epigastrium; impulse of heart felt considerably to right of sternum as though it shook the liver, and was connected with it; severe pain along edge of cartilages of left side, and extending downwards towards umbilicus, so that he could neither bend nor straighten himself, nor lie down, but he rested chiefly leaning forward over the back of a chair for the last month. Pulse almost imperceptible. He was sensible to the last.

Section cadaveris 22 hours p.m. — Countenance placid: jaundice, great œdema of lower limbs, with ecchymoses where phlyctenæ had been. Ossification of cartilage of fourth ribs. Lungs not much collapsed; on opening lungs, anterior portions emphysematous and cottony, and lower front portion of upper lobe of the left lung drawn out in a broad flat strip like a dog's ear in front of the heart, which occupied the front of the chest, pushing the mediastinum far to the right. The left lung was generally adherent to the pleura both by old and more recent adhesions, and the lower lobe was much compressed by the heart, and œdematous, giving out a bloody, frothy fluid when cut into. The right lung had no adhesions; both lungs contained much black matter with congestion of the depending portions, but there was no effusion of serum in either pleura. Bronchial membrane deep red. Heart enormously enlarged, and all its cavities and the great vessels on both sides gorged with black coagula. Its size and weight were fully three times as great as natural; every part, including the aorta and pulmonary vessels, was dilated, but without thickening of the walls or insufficiency of the valves, except the mitral, which I unfortunately omitted to examine with care. Some atheromatous deposits in the coronary arteries, but not of sufficient extent to interfere with their circulation. No serum in the pericardium, which adhered to the heart in two points near the apex of the left ventricle; and here the surface of the heart seemed more vascular than elsewhere for the space of a penny-piece round the adhesions.

The liver was enlarged, hardened, projecting across the epigastrium, of nutmeg character, and its lobes bound together by slight adhesions. Gall-bladder full of green bile. Spleen

rather enlarged, firm, and its surface dotted over with cartilaginous deposits. Kidnies enlarged, but presenting no other unusual appearance than minute red granules (probably congested Malpighian glandules) interspersed through the cortical portion. The stomach and intestines were not examined.

OBSERVATIONS.—The chief point of interest in this case was the persistence of the moist crepitation, confined to the base of the left lung, both during the acute attacks of pain, fever, &c. and during the intervals of comparative health; and in talking over the case with a distinguished auscultator, I ventured to suggest that there might be local œdema of that portion of the lung; but his idea was that the crepitation was the result of chronic inflammation of the lung. Of this, however, there were no traces found; and as œdema did exist after death, I am induced to believe that it was produced during life by pressure of the dilated heart preventing the return of the blood from the lowest portion of the lung, which was also bound down by numerous strong adhesions. The same cause doubtless, condensed the band of lung that stretched from the upper lobe, in front of the heart. If this notion be correct, this is the first instance of local œdema of one lung that I have been able to meet with, either observed by myself, or recorded by others. The jogging impulse of the heart, imperceptible, or at least intermitting at the wrist, with bellows murmur over the mitral valve, may, I think, be accounted for by the dilated left ventricle being unable to empty itself at one contraction, at the same time that the stream of blood was divided between the aorta and the patent mitral valve, producing a sound of regurgitation through the latter, and not being able to propel the column of blood in the dilated aorta with sufficient force to produce a pulse at the wrist. This view will also explain the greater weakness of the pulse during an asthmatic attack, for the bronchial and vesicular membranes being obstructed and less fitted at this time for their function of oxygenation, a greater supply of blood would be required from the heart in the right side, while that returned from the lungs to the left side would be deteriorated in

character, and therefore unfit to maintain in their ordinary vigour the muscular fibres of the heart, by the stimulus of arterial blood. This enfeebled state of the left ventricle will also explain why the aorta and left side of the heart were distended with blood as black as that in the *venæ cavæ*.

OBSERVATIONS

ON THE

STRUCTURE OF THE CORPUS LUTEUM, AND ITS VALUE AS A TEST OF EARLY PREGNANCY.

BY ROBERT LEE, M.D., F.R.S.

(*For the London Medical Gazette.*)

FROM the dissection of five human corpora lutea, after recent impregnation, and from an examination of all the preparations of human corpora lutea in the Hunterian Museum of the College of Surgeons, I concluded that the corpus luteum "is neither produced by a thickening of the inner layer of the Graafian vesicle, nor by a deposit of a new substance between its coats, but that it is formed around the outer surface of both these coats of the Graafian vesicle, and that the stroma of the ovarium is in immediate contact with the external surface of the yellow matter."

Before the paper containing this conclusion was presented to the Royal Medical and Chirurgical Society, these five corpora lutea, resulting from impregnation, were often examined by Sir Astley Cooper, Mr. Wharton Jones, and other distinguished anatomists, who were all satisfied that both layers of the Graafian vesicle were within the yellow matter, and that this had no membranous layer, or any thing else, interposed between it and the stroma of the ovary. Dr. Todd, who was appointed by the Society to examine the preparations and drawings which accompanied the paper, came to the same conclusion. Sir Astley Cooper took a great interest in this subject, and after much investigation, said there was no fact in anatomy more completely demonstrated.

Soon after the publication of this paper on the structure of the corpus luteum, in the 22d volume of the *Medico-Chirurgical Transactions*, 1839, there appeared in the 53d volume of

the Edinburgh Medical and Surgical Journal, January 1840, Observations on Corpora Lutea, by Robert Paterson, M.D., in which the following statement was made:—"Professor Baer, of Königsberg, believes that the corpus luteum is nothing more than the internal membrane of the Graafian vesicle in a state of hypertrophy. This opinion, from the celebrity of its author, has been extensively adopted by the profession. The other view, which has been lately advanced by Dr. Lee, of London, is that the substance of the corpus luteum is deposited external to both layers of the Graafian vesicle, and consequently between it and the proper substance of the ovary. This opinion Dr. Lee has been led to advance, from having noticed in *one or two* early cases that he could divide the thick internal lining of the corpus luteum into two layers, while the external covering of it appeared to be simply the condensed cellular tissue of the ovary*." Before the appearance of Dr. Lee's paper, I had frequent opportunities of observing that the proper substance of the corpus luteum was covered by two membranes; first, by its cellular envelope, a continuation of the proper cellular tissue of the ovary; and, secondly, by an immediately investing thick and distinct membrane. Since then, however, I have paid additional attention to this subject, and have had much pleasure in demonstrating both these layers to Dr. Simpson, and a number of professional friends, as well as to the members of the Anatomical Society of the town. Any one may satisfy himself of this by a very simple experiment. Let him procure the ovary of a cow containing the corpus luteum. In this animal the parts are so large as to be easily distinguished. An incision is to be carefully made through the peritoneum and proper tissue of the ovary, and then turning their edges aside no difficulty will be experienced in turning out the corpus luteum from the ovary. On examining it we find that it is still covered with its cellular envelope. Upon cutting gently through this, and reflecting it, we find that the orange-coloured corpus luteum is still covered by a proper tunic, and when

this is cut through, and elevated with the forceps, the naked corpus luteum comes immediately into view. Now what else can this second tunic be but the external membrane of the Graafian vesicle? This arrangement may be demonstrated not in the cow alone, for it is easily to be seen in the sheep and pig, as well as the human subject. We cannot understand how Dr. Lee has fallen into this error, unless it be from the circumstance of not having examined the state of parts in the lower animals, where, as in the cow, they are exceedingly manifest."

Before the publication of my paper in the Medico-Chirurgical Transactions, I had examined the corpus luteum of the cow and sheep, and had ascertained that it is not covered by two membranes, but is likewise in immediate contact with the stroma of the ovary.

Dr. Paterson says, he "had many opportunities of observing that the proper substance of the corpus luteum was covered by two membranes," but his paper contains a reference only to five recent human corpora lutea, and in three out of these five there was no ovum found within the uterus to prove that impregnation had ever taken place, and that they were true corpora lutea, in the ordinary sense of the term. Dr. Paterson merely presumed that they were corpora lutea resulting from impregnation, and stated that they were so without furnishing proof. On what evidence his presumption rested that they were corpora lutea resulting from pregnancy, the following singular history will shew:—

"A lampighter, residing in the Canonsgate, was indicted for the murder of his wife. It appeared that the parties had been married eight years, and had had no family. The man was a sober and decent person, while the woman was addicted to the use of spirits. Latterly she had become acquainted with a young man, whose frequent visits to her in the absence of her husband excited suspicion against them. This man, in a fit of passion and jealousy, inflicted on her head wounds which proved fatal. The uterine organs were removed at the inspection, and examined afterwards. The right ovary presented externally an enlargement of the size of an ordinary marble, of a dark purple colour, having several mi-

* The number of corpora lutea referred to and described by me in the paper, was five, and in all there was an ovum in the uterus or fallopian tube. Dr. P. reduces their number to one or two.

nute vessels ramifying on its surface; a distinct depression in its centre, and the appearance of a minute cicatrix. On cutting into it, the structure and appearance of a very early corpus luteum was observed, which was formerly described. The uterus contained an extremely soft decidual membrane, *but no ovum* could be detected, although minutely and carefully examined. Indeed, although this person had conceived, there can be little doubt, from the puckered and contracted appearance of the fimbriated extremities of the fallopian tube, which would hardly admit of a small probe to enter, that no ovum could have passed into them. In this case it is possible that the woman had conceived by her husband; but it is more probable that she had not, and that the husband had great cause of provocation.* But let us suppose," adds Dr. P., "that the husband had been absent for a month or so, and had inflicted similar blows on his return. it would have become a question of the greatest importance to have determined not only if that was a true corpus luteum, but whether or not it was possible to have been produced—the result of a conception before his departure. Although this case is in so far imaginary, yet the circumstances supposed are very likely to have happened, and the appearances observed in the ovary, if carefully examined, would either have been set down, on the one hand, as a clot of blood, or as bearing at least none of the marks of the corpus luteum, as described by authors."

The following description is given of this body by Dr. P. :—

"Upon making a section of this corpus luteum, blood exuded abundantly from the whole cut surface of the ovary. This blood having been gently removed, it presented very nearly the appearance seen in fig. 2. The cellular tissue of the immediately surrounding portion of the ovary was very much filled with blood, and the external margin of the corpus luteum was of an intensely dark colour; thicker, however, on one side than the other. The internal membrane, which was of a bluish colour, and partly filled with blood, was irregular in its shape; and between it and the dark external margin, formerly mentioned, the substance was of a brighter red colour, having dark striæ

or folds running through it. After immersion in spirits, these striæ assumed a yellow colour, and the internal membrane could, with delicacy, be raised up from the substance of the corpus luteum. The uterus of this case was a little enlarged, and contained an extremely thin and soft decidual membrane*."

From the preceding history and description, and coloured representation of this body in the ovary in a recent state, I was led to conclude that it was nothing but a coagulum of blood, such as I have seen in a multitude of cases where impregnation had never taken place, nor any suspicion of pregnancy been entertained. I had never observed a corpus luteum, in the earliest stage, undoubtedly resulting from impregnation, so completely resemble a mass of coagulated blood in the ovary. To call this a true "corpus luteum," or one resulting from pregnancy, seemed unwarranted. In all the true corpora lutea in my possession, the convoluted yellow matter was seen outside the two layers of the Graafian vesicle, interspersed with radiating bands; but nothing of this appeared from Dr. P.'s delineation, but the appearance of a clot of blood, with a layer of lymph or fibrine in the centre. These circumstances, conjoined with the following striking facts, viz. the appearance of a single layer, alleged to be the internal layer of the Graafian vesicle, in the interior, whilst there was said to be a proper capsule outside,—no ovum found within the uterus,—and the still more striking fact mentioned by Dr. P., that the fallopian tube was so contracted "that no ovum could have passed into it," fully justified me in drawing the conclusion, that this *red body* in the ovary was not the result of impregnation, and was *neither* a true nor a false corpus luteum, but a clot of blood.

With this conviction, I stated in my fifth lecture that I believed this to be a false corpus luteum (the term corpus rubrum would have been more correct), and made the following remarks upon it in a paper On the Value of the Corpus Luteum and Deciduous Membrane as Tests of Early Pregnancy, published in the MEDICAL GAZETTE, December 12, 1842:—"It is inferred from this sin-

* The preparation is stated by Dr. P. to belong to Dr. Simpson, to whom he expresses his obligations for allowing him to examine it.

gular history, although no ovum, nor any vestige of an ovum, could be detected on the most minute and careful examination, neither embryo, vesicula umbilicalis, amnion nor chorion, that this murdered woman was pregnant, and that she was an adultress. Not only is the pregnancy considered a fact of absolute certainty, but the red clot of blood in the ovary, which does not present one of the characters of a true corpus luteum—into the composition of which there does not enter a particle of yellow matter—is described as a corpus luteum ‘a very short time after the rupture of the Graafian vesicle and escape of the ovule.’ An ovule which was never seen is presumed to have escaped from this ovary; but on dissection, though hunted out with the greatest care, it was nowhere to be found. My conscientious belief is, that a *fecundated ovum* never existed here at all, and that this woman, who had lived eight years with her husband, and was barren, and whose internal uterine appendages were in a state which rendered pregnancy impossible, or at least highly improbable, died during menstruation. I have so often seen all the appearances here described in the ovaria and uterus of women who have never been pregnant, that I have no doubt of the fact. If I were summoned into a court of justice, I would have no hesitation in declaring upon oath, from the evidence furnished, that the proofs of pregnancy were wholly wanting. With this deep conviction upon my mind, I could not avoid drawing the attention of my class to this case, and imploring them to be cautious how they gave evidence in courts of law to criminate unmarried women who have committed suicide, or died suddenly from any cause.”

“But,” says Dr. P., “the uterus of this case (woman?) was a little enlarged, and contained an extremely thin and soft decidual membrane. The utter worthlessness of the decidua as a test of pregnancy found in the uterus of this case (!) will easily be estimated from the following quotation from Dr. Blondell’s Lectures, and also the real value of the microscopical researches determined which have led to the revival of an antiquated and exploded error, viz. that the decidua is nothing but the altered mucous membrane of

the uterus.” The decidua is sometimes produced in cases of difficult menstruation; and it is important to remember that it may be mistaken for abortion. It resembles it in the pains, discharge of blood, &c. But the one presents an embryo, at various stages of increase, while in the other that is altogether wanting. It seems now agreed that the discharge of this membrane (recognised by Dr. Baillie to be similar in structure to the decidua) occurs frequently in unmarried females. It would appear to be generated spontaneously by the inner membrane lining the uterus.”

It was observed at the commencement of this paper, that “If from conviction I could alter my opinion on Dr. Paterson’s corpora lutea it would afford me the greatest satisfaction to do so; for I know from experience that the pleasure of renouncing an error is only equalled by the delight felt on discovering a new truth.” No opportunity, however, was ever offered me of arriving at this conviction.

Dr. Paterson considered these criticisms unjust, and as calculated to put an “incubus,” as he says, upon his character as an observer. Nearly two years after they had been published, he “resolved, by the advice of some professional friends (whose names are not mentioned), to submit the preparation to my inspection.” “My friend, Dr. Bowman, of Sunderland,” he says, “submitted it to you, not suspecting it was the identical specimen so much discussed.” It will be seen by the following letter that all the facts of the case were carefully concealed, in order that I might arrive the more certainly at a correct conclusion, and avoid the danger of error! To render the opinion which I was to give of the greatest weight, the preparation was wrapped up in linen rags, having the appearance, from their colour and smell, of having recently been employed at a post-mortem examination at Monkwearmouth! Nothing was said about the murder of the woman, of the decidua in the uterus, of the contracted tube, of the bright red colour of the mass in the ovary, and the blood which escaped in profusion when it was opened, nor of the four years the preparation had been in alcohol. It was not considered necessary for the re-

moval of the "incubus" on Dr. Paterson's "character as an observer" that any of these facts should be revealed.

Monkwearmouth, May 9, 1844.

Dear sir,—I venture to encroach on your valuable time, to ask your opinion of the accompanying preparation illustrative of a point to which the medical world knows you to have paid much attention.

Is the corpus luteum in this case a true or false one? It was taken from the body of a female upwards of thirty years of age. She died suddenly, and no accurate information could be gained regarding her last menstrual periods. Several medical gentlemen have examined the corpus luteum, and are so much divided in opinion about it, that they would feel deeply indebted to you to examine it, and favour us with your *decision* upon the question.

I hope you will have the goodness to excuse the great liberty a stranger thus ventures to take; but knowing your kindness, and having every confidence in your opinion, I have the honour to remain, your obedient servant,

HENRY O. BOWMAN, M.D.

Dr. Lee.

P.S.—As the preparation belongs to a medical friend, who was so kind as to allow me to examine it, I shall feel obliged by your returning it with your decision. If it were mine you would be heartily welcome to it; indeed I should have considered it my duty to have presented it to you.—H. O. B.

The following was the condition of the uterus and its appendages when they came to me:—

The uterus was not enlarged in the slightest degree beyond the ordinary size at the middle period of life in women who have never been pregnant. Its walls were compact, and the strata of muscular fibres could not be separated from one another as they always can be after recent impregnation. The lining membrane of the uterus was unusually thickened, but no part of it was covered with deciduous membrane. Under alcohol and water, with the naked eye and with the magnifier, I could not detect the slightest portion of this membrane adhering to the inner surface of the uterus, nor did the lining membrane of the organ present the appearance which it usually does when the recent decidua has been removed with the utmost care. The glands of the orifice and cervix uteri were not developed, and there was no change in

the walls, cavity, cervix, or orifice of the uterus, to indicate that recent impregnation had taken place. If, therefore, as Dr. Paterson states, "the uterus of this case was a little enlarged, and contained an extremely thin and soft decidual membrane" when first opened, the enlargement had entirely disappeared, and the thin and soft decidual membrane completely vanished, when the uterus came into my possession. Why "no ovum could be detected, though minutely and carefully examined, was now fully explained."

The *fimbriated extremity of the right fallopian tube* had adhered throughout nearly its whole extent by old, dense, false membranes, so as to fix the tube immoveably in its unnatural position, and render it incapable of performing its functions. Neither spermatic fluid could have passed from the uterus to the ovarium, nor could an ovum have been transmitted from the ovarium to the uterus. These firm false membranes had been extensively divided artificially, but by placing the cut ends in apposition, it was obvious that the corpus fimbriatum had been extensively, if not completely, adherent to the ovary, and that the tube must have been impervious. The condition of the tube and ovarium, therefore, fully confirmed the accuracy of Dr. P. when he stated, "that from the puckered and contracted appearance of the fimbriated extremity of the fallopian tube, which could hardly admit of a small probe to enter, that no ovum could have passed into the uterus." But, though "no ovum could have passed into the uterus," he nevertheless maintained "that this person had conceived."

A section had been made, as Mr. Wharton Jones describes, dividing the ovary and the body it contained into two similar halves. The appearance which this section of the body presented was like that of a firm dark clot of blood, having in its centre an elongated membraniform shred, one end directed towards the interior of the ovary, the other towards the exterior. From this shred, which was smooth on its free surface, processes extended here and there in a radiating manner into the substance of the clot-like body. The body in question was of a lenticular form, about six-tenths of an inch in diameter, and about four-tenths thick,

and projected on the surface of the ovary by somewhat more than half its diameter. The prominent part being covered only by the indusium of the ovary, the dark-red brown colour of the body shone through.

As Mr. Jones has further stated, I was disposed to consider the body in the ovary to be what to the naked eye its general appearance seemed to indicate, viz. a clot of blood containing a flake of fibrine, from which the red corpuscles had been separated. And on making a fresh section of one of the halves of the body in the same plane as the first, my belief was strengthened that it was not a corpus luteum resulting from impregnation; for the appearance which presented itself was such, that the naked eye could not well recognise it to be any other than that of a clot of blood. The extraordinary manner in which this body projected beyond the surface of the ovarium was the first circumstance that attracted my attention on examining it, and satisfied me that, although it had a yellowish colour, it was a false corpus luteum, and wholly unconnected with pregnancy. In no true corpus luteum resulting from impregnation had I ever witnessed this remarkable projection; but in several false corpora lutea in the Museum of St. George's Hospital it is so obvious that it immediately attracts attention. The appearance of the membrane in the centre of the clot was also widely different from the appearance presented by the empty Graafian vesicle within the yellow matter in all the early corpora lutea resulting from pregnancy which had ever come under my observation. The absence of the decidua within the uterus, the morbid condition of the fallopian tube, the unusual projection of the body in the ovary, the colour both of the old and fresh sections of it, which presented nothing but the appearance of a clot of blood, were the circumstances that led me to conclude, though totally ignorant of the history of the case at the time, that it was a false corpus luteum, and did not result from pregnancy. This opinion I expressed to Mr. Wharton Jones in the clearest possible manner before he commenced the microscopical examination of the body in the ovary, and during the investigation.

Mr. Jones thought that no conclusion should be come to, considering the

gravity of a decision on such a point, until the body had been subjected to a most careful microscopical examination, without which, indeed, he believed any decision would be mere guess work; coinciding in the propriety of this, I gave over to him one half of the ovary and the body in it for microscopical examination. Had I been aware that the preparation had been four years in alcohol I should not have permitted an appeal to be made to the microscope at all, knowing how little trust Mr. Jones puts in results obtained under such circumstances. I would have decided with the naked eye that it was a mere clot of blood in the ovary, and not a corpus luteum resulting from pregnancy, and on communicating this decision to the stranger at Monkwearmouth, would never have discovered the treacherous purpose for which he had sent it to me. The incubus would have lain on Dr. Paterson's character neither heavier nor lighter than before, and the ridiculous conspiracy into which he and his friends had entered would never have been revealed.

"Examined microscopically," says Mr. Jones, "the central membranous shred was found to present the following structure:—

"1. On its free surface a fine film of tessellated epithelium. 2. Invested by this epithelium was a stratum of finely interwoven transparent fibres, with dark contours, somewhat like elastic tissue. 3. Outside all was a layer identical in structure with the stroma of the ovary; the same structure as that composing the principal thickness of the walls of Graafian follicles."

"The membranous processes possessed a similar structure, and were found to be continuous with the stroma of the ovary. That part of the body next the substance of the ovary had, by its pressure, so condensed the stroma at the place, that the latter looked somewhat like an external capsule sending processes inwards, which met and interwove with those sent outward by the central membranous shred. But that the appearance of external capsule was the result simply of matting of the stroma of the ovary by pressure, is shown by the circumstance that it was absent at the peripheral part of the clot-like body, there being there, as already said, merely the indusium.

"As to the microscopical characters

of the clot-like matter itself:—this was found to consist of granulous corpuscles, somewhat like so-called compound inflammation globules closely aggregated, and red blood corpuscles interspersed amongst them. The latter had lost some of their colouring matter, but the granulous corpuscles were tinged red, as if they had imbibed it.

"The conclusion which is to be drawn as to the nature of the body from this investigation is, that it is a true corpus luteum in an early stage; that the central membranous shred is the wall of the Graafian follicle, from which the ovum had escaped; and that the clot-like mass (which would have by and by acquired the characteristic yellow appearance of the corpus luteum, traces of which, indeed, could in some deep places be detected), together with the membranous processes extending through it from the central shred to the stroma of the ovary, is the stroma surrounding the Graafian follicle infiltrated with bloody-looking matter.

"I say *bloody-looking*, for although it is certain that there is some blood present, it remains a question what sort of matter the granulous corpuscles were developed from—blood effused in substance, or exuded lymph?"

Here it is evident Mr. Jones employs the term true corpus luteum from a consideration of its anatomical structure alone, not venturing to decide positively on the nature of its relation to conception.

"According to this view," adds Mr. Jones, "the formation of a corpus luteum would be quite independent of the contact of seminal fluid with the ovary or ovum, and consequently independent of impregnation. And that it is so has been already established, as regards the lower animals, by the experiments of Haighton and Blundell on rabbits, viz. that though by obliteration of some part of the female genital passages, the access of semen to the ovary was prevented, still Graafian follicles were observed to have burst, and corpora lutea formed *post coitum*.

"The same circumstance appears likely to have held in the case of the woman whose ovary forms the subject of the preceding observations, for Dr. Lee informs me that the fallopian tube of the same side was diseased and contracted, if not obliterated, and that

the uterus had undergone none of the changes usually observed in its cavity and cervix after recent impregnation."

On the microscopic evidence thus furnished to me by Mr. Jones, and upon that alone, in opposition to the opinion I had formed with the naked eye, I admitted that this body in the ovary was a true corpus luteum; but the term was employed by me in the sense in which it is understood by Mr. Jones, and as furnishing no proof of impregnation. I never for a moment contemplated going to the Medico-Chirurgical Society and describing this body as a true corpus luteum resulting from impregnation. Had I not been most happily prevented by want of time, the whole truth now stated would have been communicated to the Society, and it would never have been discovered that the ovary belonged to the lamp-lighter's wife.

And that the same view regarding the nature of the body in the ovary as that which I originally took will still be taken by the greatest anatomists, appears certain from the following opinion given of it by Professor Owen on the 7th of August last:—"Independent of any history connected with it," said Mr. Owen, in the most positive and unhesitating manner, after a careful examination, "I would give the opinion that it is a false corpus luteum. It would formerly have been stated to be a true corpus luteum, and affording undoubted evidence of pregnancy; but I do not think that any person conversant with the structure of corpora lutea resulting from pregnancy would regard this as a normal specimen of that structure. I should never have thought of giving a decided opinion of impregnation having taken place from the presence of this extravasated blood in the ovary around an ovisac." Professor Owen's opinion, therefore, coincides with that originally given by me, and may be considered as settling the point in dispute.

If I were now summoned into a court of justice, I would have no hesitation in declaring upon oath, from the evidence furnished, that the proofs of pregnancy were here wholly wanting.

I would now willingly take leave of this subject, feeling that enough has been done to establish the truth, but there are other circumstances connected with the affair which it becomes abso-

lutely necessary for Drs. Paterson and Bowman to explain to the satisfaction of their professional brethren. Three letters were sent by me to Dr. Bowman respecting the preparation in question, but no copies of these were kept by me. The first of these letters, I recollected distinctly, was written about the middle of May, 1844, the second about the 20th May, and the third near the end of June. The second and third of these letters were duly acknowledged to have been received by Dr. Bowman, but no acknowledgment was given by him that the first letter had ever reached Monkwearmouth. This circumstance was remarked at the time, but it raised no suspicion that anything wrong was intended, or that the fact would be questioned that such a letter had been sent. All these letters Dr. Bowman positively affirms were sent forward to Dr. Paterson, and they were all consequently in his possession when he wrote to me as follows on the 26th July:—"Under these circumstances, I resolved, by the advice of some professional friends, to submit to your inspection the preparation of the disputed corpus luteum itself. My friend Dr. Bowman, of Sunderland, submitted it to you, not suspecting that it was the identical specimen so much discussed. You have declared to Dr. Bowman, in two letters which I have now before me, that the body which had not one of the characters of a true corpus luteum is really a true corpus luteum in an early stage." In reply to this, I stated that I had not preserved copies of my letters to Dr. Bowman, and requested Dr. P. to send copies of them to me. On the 2d August this request was complied with, but in an imperfect manner, the second and third being sent, but the first not. The second bore the date of May 22d, the third of June 26th. My first letter to Dr. Bowman, which had been written previous to the 22d of May, continued to be unacknowledged. Dr. Paterson made no mention of it whatever, though I considered it absolutely impossible for the opinion given by me in the second letter to be understood at all without the first. No time was lost by me in writing to Dr. Bowman for information respecting the three letters I had sent to him, but the only circumstance he could recollect about them was that

they were all in Dr. Paterson's possession.

Monkwearmouth, 6th August.

My dear sir,—As soon as I received your letter, I wrote to my friend Dr. Paterson, who *had your letters in his possession*, to furnish you with copies of them as you requested, which, from a letter I received yesterday, I hear he has complied with. This is my apology for not having acknowledged your letter ere this.

I take this opportunity of assuring you that I was totally ignorant till some time after I had forwarded the preparation to you, that this was the corpus luteum about which you and Dr. Paterson had differed in opinion.

The trouble you have taken and the kindness you have shown in complying with my request, place me under an obligation which it will be my study at the first opportunity to repay.—I remain, your obedient servant,

H. O. BOWMAN.

Dr. Lee.

Monkwearmouth, 7th August.

My dear sir,—In reply to your letter I received this morning, I beg to inform you that my friend Dr. Paterson has *all your letters at present*, and I do not recollect their dates; but should you desire it, I will apply to him for the information you request.

I remain, ever yours,

Dr. Lee.

H. O. BOWMAN.

Finding that Dr. Bowman did not furnish me with the dates of my letters, I wrote to endeavour to ascertain their number; but his answer in regard to this point also supplied me with no information. He affirmed, however, again positively that they were all in Dr. Paterson's possession.

4, Saville Row, 8th August, 1844.

My dear sir,—I have again to request that you will, by return of post, inform me whether you did not receive from me more than *two* letters relating to the preparation in question. The dates are of no importance, but it is of the greatest that I should receive a positive answer to my simple question. You cannot fail to remember the number of my letters.—I remain, dear sir, very faithfully yours,

ROBERT LEE.

Monkwearmouth, 9th August, 1844.

My dear sir,—I cannot at present give you an answer to your question, as *Dr. Paterson has all your letters referring to the preparation in his possession, and my memory will not allow me to speak positively*. I will write again to Dr. P., and will be able, in the course of a day or two, to give you a

positive answer.—I remain, dear sir, your obedient servant,

H. O. BOWMAN.

Dr. Lee.

The following letter was addressed to Dr. Paterson on the 5th August.

London, 4, Saville Row,
5th August, 1844.

Dear sir,—I wrote another letter to Dr. Bowman, before the 22d May, 1844, of which you have not forwarded a copy to me. I am much obliged to you for the copies of the *two* you have sent, and I trust you will feel entirely satisfied with the account which Mr. Wharton Jones will give in the next number of the Medical Gazette of his microscopic examination of the body in question.—I remain, dear sir, very faithfully yours,

ROBERT LEE.

To Dr. Paterson.

Leith, 10th August, 1844.

Dear sir,—I beg to acknowledge the receipt of your letter dated August 5th, which would have been replied to sooner, had it not been that I expected, ere this, to have heard from Dr. Bowman in answer to a letter sent to him immediately after the receipt of yours. You *accuse* me of having kept a letter which you wrote to Dr. Bowman, of a previous date to those copies of which were sent to you. In reply to this *accusation*, I have to state that I never received any letter of yours from Dr. Bowman of a prior date to those the copies of which were sent you. In addition, you make no reference to a previous letter in the first one I received of the 22d May, and I am convinced, that, had any previous letter arrived, such would have been immediately communicated to me by Dr. Bowman. As soon, however, as I receive an answer from Dr. B. I will write to you.

I shall be glad if Mr. Jones's statement of the question in dispute between us shall be satisfactory to me.—I have the honour to remain, your obedient servant,

ROBERT PATERSON.

Dr. Robert Lee, London.

On receiving this letter I resolved to have no further correspondence with its author, and stated this to him.

The following letter has been published by Dr. Paterson in the last number of the Edinburgh Medical and Surgical Journal, No. 9, in the correspondence said to have taken place with Dr. Lee. This letter was never sent to me (at least no such letter was ever received by me), but the date and other circumstances prove that it is a spurious edition of the last letter, and it shows how Dr. Paterson was

actually employed at the time in raising up an insinuation of his own, into an accusation against himself, which had never been made by me. The reader will see that there was no insinuation or accusation made in my letter of the 5th August against Dr. P., nor did I suppose, at this time, that there existed an individual in the medical profession, or any other profession in Great Britain, so base and unprincipled as to attempt to suppress a letter in a scientific correspondence for the purpose of convicting another of a gross contradiction against himself.

Leith, 9th August, 1844.

Dear sir,—I beg to acknowledge the receipt of yours of the 5th instant, which would have been answered sooner, but that I have been waiting for a reply to a letter sent to Dr. Bowman, for the purpose of ascertaining whether or not there was a previous letter to those, copies of which were sent to you. I was astonished to observe your *insinuation* that I had kept back a letter which you wrote to Dr. Bowman, of a previous date to those copies of which were sent you. In reply to this accusation, I may state, that I never received any letter which you had communicated to Dr. Bowman prior to the date of those the copies of which were sent you. In addition to this, however, in your letter of the 22d May, you refer to no prior communication to Dr. B. which I think under the circumstances, would have been referred to. I am equally convinced that Dr. Bowman did not receive any previous letter, otherwise it would have been forwarded to me. I am sorry that I have not heard from Dr. Bowman before this time, for it has delayed my reply to your last letter longer than I intended.

I shall be glad if Mr. Jones's statement of the question in dispute between us shall be satisfactory to me.—I remain, your most obedient servant,

(Signed) ROBERT PATERSON.

Dr. Robert Lee.

Dr. Bowman, whose memory, on the 9th of August, would not allow him to speak positively about the number of letters he had received from me, would appear to have had this faculty restored to him in a miraculous manner the following day, for he then distinctly recollected their number and their dates, as is shown by the subjoined letter from Dr. Paterson. In this letter Dr. P. now acknowledges the existence of the letter from me to Dr. Bowman which he had previously denied, and

complained of my accusing him of suppressing it.

Leith, 12th August, 1844.

Dear sir,—I presume that you will by this time have heard from Dr. Bowman himself regarding the number of your letters to him. I may state, however, that they were three in number. The *first*, dated May 13, acknowledges your receipt of the preparation; the *second*, dated May 22, contains your opinions regarding it; and the *third*, dated June 26, accompanies the return of it. These, Dr. Bowman distinctly states, were the only letters received from you in connexion with the preparation sent you.

I have just seen Mr. Jones's description of the preparation, and more especially of the corpus luteum in question, in the *Gazette* of Saturday last. It contains one or two most important errors which it will be necessary to have corrected. Before doing so, however, I am anxious to know if Mr. Jones's letter contains all the statements you propose to make public regarding your unjust criticisms on the case, and as more especially stated by me in a former letter?

I should feel obliged by your communicating to me, with your earliest convenience, if any further statement on the subject is to be made public.—I have the honour to remain, your obedient servant,

ROB. PATERSON.

Dr. Robert Lee, London.

This acknowledgment of the receipt of my first letter of the 13th May, was not, however, accompanied with a copy of this letter. It was still withheld, and is now withheld, for no duly-authenticated copy of this letter has yet reached me; nor have any authenticated copies of the second and third yet been obtained, though I have applied to the proper quarter for these. Considering the inaccuracy of the published copies of the letters Dr. P. sent me, no dependence can be placed upon the accuracy of the copies he has published of those I sent to Dr. Bowman.

W. J. Dodd, Esq. of Monkwearmouth, called upon Dr. Bowman, at my request, to demand an explanation of his conduct in this affair, and to inform him that until he revealed the whole of the circumstances I would consider him to have acted throughout with anything but professional honour and honesty. Mr. Dodd informed Dr. B. that I would not free him from knowing collusion in the transaction unless he wrote a full and satisfactory account of his share in it. He told Mr. Dodd that he was to be away from home for

a day or two, but that on his return he would write to me. Fourteen days elapsed, but Dr. Bowman remained silent, and insensible to the accusations personally made against him by Mr. Dodd. With the view of once more testing the retentiveness of his memory, and obtaining a more full development of his character, I addressed him as follows on the 24th of August, with the desired effect:—"You have now had abundance of time to refresh your memory, and can tell me, no doubt, every thing respecting the first letter I wrote to you, and whether it was impounded at Monkwearmouth, or actually sent forward, with the others, to Leith, as you stated in a former letter. Your friend in the north threatens to publish the correspondence between you and me. I hope you will take care, before he does so, that my first letter is forthcoming, and that it is published with the others. Truth has nothing to fear. A man who conscientiously tells the truth has only to go on in his course; but a man who departs from the truth has everything to dread. Mr. Dodd will again soon call upon you to receive from you those explanations which are evidently required to clear your character from the suspicions under which it must lie until you reveal all the circumstances connected with this affair. Your first letter to me led me to form a very favourable opinion of your candour and integrity: I pray that my good opinion of you may continue unchanged."

After receiving this letter, Dr. Bowman went to his old and intimate friend and associate, Dr. Paterson, of Leith, where not only his memory, but all his other intellectual and moral faculties, appear to have become bewildered. Once more it will be seen, in the following letter, that he denies the existence of my first letter of the 13th May, which he distinctly stated to Dr. Paterson on the 12th August had been received by him, and which he had before thrice affirmed was in Dr. Paterson's possession. It will be further observed, that Dr. Bowman suggests the propriety of my forging a letter to supply the place of my first letter, which, in his loss of memory, he wished to annihilate, but which was at the time in Dr. Paterson's possession. In his state of

bewilderment, Dr. Bowman steps boldly forward to give an implicit denial to an insinuation that another letter was received by him than those that had been acknowledged. The insinuation is contained in no letter written by me; it is made by Dr. Bowman himself, like the insinuation and accusation justly made by Dr. Paterson against *himself*. It is made by Dr. Bowman obviously for the purpose of perverting the truth, and causing it to be believed that I claimed from him the restitution of a fourth letter, which had no existence. In the Edinb. Med. and Surg. Journal, Dr. Paterson has followed the same course, for a similar purpose—misleading the reader who is unacquainted with the facts. Dr. Paterson says, Dr. Lee “declares that there was another letter to Dr. Bowman (the gentleman who sent the preparation for me) more than those the copies of which I transmitted to him.” I repeat the declaration, that no copy of my first letter was sent to me by Dr. Paterson at the time its existence was acknowledged both by him and Dr. Bowman, and, therefore, that there was another letter more than those the copies of which were transmitted to me. The acknowledgment was made, but the letter was still withheld.

Leith, 27th August.

Sir,—Your letter of the 24th August, through Mr. Dodd, has already been duly acknowledged, and I have now again to state that no refreshing of my memory can ever make me produce a letter which had no existence. You are already in possession of the dates and general import of all the letters I received, and Dr. Paterson has transmitted copies of them. I now give an implicit denial to your insinuation that another letter was received than those that have been acknowledged. The *onus probandi* therefore lies with you. Probably you will be able to concoct a letter for the purpose, and to favour me with a copy of it, and add an additional eulogium on *truth*?

The freedom of access which I at once gained to you, and your obliging letters to me, a stranger, gave me a favourable opinion of your goodness. Your last discourteous letter, however, has dissipated all such ideas, and renders it necessary for me to refuse all further correspondence with you.—I have the honour to be, your obedient servant,

H. O. BOWMAN.

Dr. Lee.

To complete the portrait of H. O. Bowman, M.D., of Monkwearmouth, it

will only be necessary to add the following letter:—

Monkwearmouth, 27th May.

My dear sir,—I feel exceedingly obliged and grateful for the attention and trouble you have taken in examining and giving me your opinion of the preparation I took the liberty of forwarding to you. It is very gratifying to me that you, whose opinion bears such weight in the medical world, should have come to the same conclusion *I had already formed*, namely, that it is a true corpus luteum.

I have communicated with my friend, who will be happy to let you retain the half of the ovary as you request, but as he has some intention of publishing the case at some future period, he would wish you to return the remainder as soon as convenient.

I take this opportunity of returning you my sincere thanks for your kindness and attention.—I have the honour to be, your obedient servant,

H. O. BOWMAN.

Dr. Lee.

DR. SYNNOT'S CASE OF SUDDEN BLINDNESS.

To the Editor of the Medical Gazette.

SIR,

I SHOULD feel obliged by your inserting in your valuable journal the following brief notice of a case which I considered to be one of effusion of blood either within or around the optic nerve. I think the case presents several peculiarities; and as I have never heard of a perfectly similar one, I should much like to learn what view may be taken of it by some of your more experienced readers. I therefore refrain from offering any observations of my own.

I am, sir,

Your obedient servant,
ROBERT SYNNOT, M.D.

8, Westbourne Place, Eaton Square,
Oct. 23, 1844.

Case of sudden blindness, (produced by effusion of blood on the optic nerve?).

M. D., aged 18, a laundry-maid, of strumous appearance, came to me on the morning of the 8th of this month. The previous evening, as she was reaching up to take some clothes off a line, she experienced a sensation as if something had fallen into her left eye, followed by total and instantaneous loss of vision. There was no lachrymation nor any inflammation of the

conjunctiva; the cornea and humours perfectly clear and unclouded, so that it was evident there was no effusion of blood within the eyeball. There was slight redness of the parts surrounding the eye, probably produced by the patient's having rubbed the eye a good deal. The iris contracted and dilated actively, according as the light was more or less intense; though there was no perception whatever of light, even on holding a candle pretty close to the eye. On making an examination, I found there was no foreign body present, though she still complained of the sensation of something being in the eye. There was deep-seated pain in the orbit, and supra-orbital headache. She was ordered to take a brisk purgative, to have leeches to the temple, and afterwards to keep a cold lotion applied to the eye. She was further directed, as soon as the medicine had operated freely, to take a powder composed of Calomel, gr. i. j, Opium, gr. $\frac{1}{3}$, Tartarized Antimony, gr. $\frac{1}{4}$, which was to be repeated every second hour.

The next day a blister was applied to the temple, and the mercury continued. On the 10th the leeching was repeated, as she complained greatly of the pain in the orbit and forehead.

Mercury continued.

11th.—Mouth becoming tender.

Continued the mercury.

In the evening she could distinguish the light of a candle.

12th.—Could see pretty well; the gums sore. Stopped giving mercury.

13th.—Vision quite restored, and has continued so ever since. There was no fever at any time during this attack, and the pulse was never above 70, soft and full.

ANALYSES AND NOTICES OF BOOKS.

“L'auteur se tue à allonger ce que le lecteur se tue à abréger.”—D'ALEMBERT.

An Exposition of the Laws which relate to the Medical Profession in England; with an Appendix, containing an ample Analysis of Sir James Graham's Bill for the better Regulation of Medical Practice. By JOHN DAVIES, M.D. Hertford. 8vo. pp. 84. Churchill.

This moderate publication of Dr. Davies is well timed. The present
883.—xxxv.

agitated condition of the medical profession makes all anxious to have knowledge of the laws under which its members exist and carry on their calling; but until Dr. Davies's work appeared, we know of none except the larger and more expensive volume of Wilcox, that contained the kind of information which is so much desired at this particular moment. Dr. Davies's publication gives an account of the various charters and enactments that have reference—1st, to the College of Physicians; 2d, to the College of Surgeons; 3d, to the Society of Apothecaries; 4th, to the University of London; and it concludes with a good analysis of the Medical Bill, which is now attracting so much attention throughout the country.

Dr. Davies's view of this proposed measure is decidedly favourable; had he had a finger in the pie himself, he could not have regarded it with feelings of higher confidence, nor given it in all its parts, his more unequivocal support. The author in a private note to us, regrets that we have not taken the same view of the measure as he has himself. We give the Doctor credit for perfect candour in his mode of viewing and of discussing the measure; we greatly approve of the tone and temper, and excellent taste in which his analysis is written; it is concise and to the purpose, and we cannot pay the author a greater compliment than by requesting all *impartial* persons to procure his work and to read it, and to judge of it for themselves. They will obtain much useful information from the historical portion; and from the critical part they will, perhaps, rise with views considerably modified from those with which they sat down, supposing these views to have been unfavourable or hostile.

A Concise Historical Sketch of the Progress of Pharmacy in Great Britain, from the time of its partial separation from the practice of Medicine until the establishment of the Pharmaceutical Society. By JACOB BELL. 8vo. pp. 108.

This, too, is a publication that we believe must be acceptable to the profession at this time. There can be no doubt that *pharmacy*—and we scarcely separate *materia medica* from pharmacy in the present day—is even a very important element in the medical profes-

sion. The day was, indeed, when a knowledge of simples constituted the principal science of the physician; and when his learning extended to little more than the history of the substances with which he treated disease. But our object now is not to analyse Mr. Bell's production; it is merely to make its existence known to our readers, and to invite their attention to it as a source whence they may obtain information of a kind that is peculiarly useful at this time. We may, perchance, have to revert to it ourselves more particularly by and by.

MEDICAL GAZETTE.

Friday, November 1, 1844.

"Licet omnibus, licet etiam mihi, dignitatem
Artis Medicæ tueri; potestas modo veniendi in
publicum sit, dicendi periculum non recuso."

CICERO

A MANIFESTO

BY THE MEDICAL AND SURGICAL ASSOCIATION
OF THE BOROUGH OF MARYLEBONE.

8vo. London, Oct. 1844.

HAD our limits allowed us, we should have felt it a duty to the profession to have republished this document entire, and by way of pendent to the Manifesto of the Royal College of Physicians of Edinburgh, printed in this day's GAZETTE. It supplies us with quite a new feature in the subject of Medical Reform: the object proposed is no less than the establishment of "A College of General Practitioners in Medicine, Surgery, and Midwifery, to be incorporated by Charter and Act of Parliament, having an elective Council, a Court of Examiners, and power to frame by-laws, and to examine and license all future general practitioners."

This movement on the part of the many respectable gentlemen whose names are connected with the Marylebone Medical and Surgical Association, cannot be viewed as other than the necessary fruit of the spirit that has dictated the proposed Medical Bill, and of the line of conduct that has been

pursued by the Council of the Royal College of Surgeons towards its members. We have taken much the same view of the tendency of the Bill as the Marylebone Association; we have deplored the introduction of grades into a department of the profession that admits of none, and we have repeatedly denounced what we believe to be the injustice of arbitrarily elevating one set of men, and depressing another, both having alike started on a footing of perfect equality. The immense majority of the members of the Royal College of Surgeons ask by what act of theirs, since they entered on this footing of perfect equality with all, they have made themselves obnoxious to degradation? For they feel that it is even as much degradation to have a certain number of themselves raised arbitrarily over their heads, as it would be were they to be thrust lower, a favoured few being retained on the old level.

The Council of the College of Surgeons have the undoubted right to make what regulations they see fit, having a prospective bearing: those who present themselves, craving entrance into the College under these, having the conditions before them, will know what they have to expect; if they have only qualified for a lower grade, they will have no reason to complain that they are not placed in one that is higher; but we apprehend that, upon every principle of equity, they who have started on the same basis, who have all alike qualified for one grade, who have *all alike received a diploma of the same tenor and value, as testimony to the public of the equality of their acquirements*, should not be subjected to degradation, whether in fact or by implication. The Council of the College of Surgeons, it seems to us, cannot without an unjust and indefensible straining of its power persevere in its present

course of showing a preference to one class of its members over another. They who are members of the Royal College of Surgeons up to this hour, are so in virtue of having pursued a course of study similar in point of extent, and of having undergone an examination identical in kind and character, and paid a fee of one denomination in every instance;—all are *de jure*, as they are *de facto*, equal. What power that is not arbitrary and unjust shall make them otherwise? The attempt is against every principle recognised in English law, whether statute and common, or in equity; above all, it is against that spirit of fair play and generous usage which we Englishmen pride ourselves upon sucking in with our mother's milk, and preserving through life as that which is dearest in our character. Would not a bill filed in Chancery by one or more of those members of the Royal College of Surgeons, who believed that it was in contemplation to let them of certain privileges which either were, or had been, conferred on others of the body, upon grounds purely arbitrary, be entertained? If it were, we feel persuaded that it would carry the day against the governing body. The petitioners in such a case would have right on their side; and, in theory at least, right in England has yet been held to be might.

We own that we are totally at a loss to conceive the spirit that has prevented the Council of the Royal College of Surgeons from embracing the opportunity that was afforded them of raising the members of the College, not only in their own esteem, but also in the estimation of the public, of ennobling them in some sort, of giving to the whole profession of medicine in England, which they actually represent, a worthier position, a higher character. It is because they have not done this, however,

that we see the profession in arms from Land's End to the Tweed, and that we have proposals for Colleges of General Practitioners. The exigencies of the public have created this class of medical men; who, as a whole, and as they stand, are vastly better educated and far more skilful in the treatment of disease than were the most accomplished physicians of the last century.

These gentlemen "do well to be angry"; they have been severely treated by a knot of their own body, and they ought not to rest, and we imagine will not rest, until they have righted themselves. Let the profession of general practitioners from north to south procure the "Manifesto of the Marylebone Medical Association," and get it by heart; it is the truth; it is the right. The general practitioners want a guide in clearly understanding the position in which they and their department of the profession are placed by the Bill and the Charter; in this manifesto they will find what they require; and though all may not be of the same mind as its authors, as to the remedy, or that a "College of General Practitioners" is the best measure that can be aimed at, still the general practitioners of England must have a head; they must feel themselves members of some definite corporation, in the administration of whose affairs they ought also to have a voice; and if this be neither the College of Physicians nor the College of Surgeons, as there seems no disposition to take up with the trading Company of Apothecaries, it may be that there shall be nothing for it better than the plan devised by the Marylebone Medical Association. We would fain hope, however, yet to see differences composed, and the profession preserved in its two or three natural integral parts — MEDICINE, SURGERY (embracing Midwifery), and PHARMACY.

MOVEMENT IN THE PROFESSION.

A MEETING of the medical practitioners resident within the borough of Dover was held in the Old Town Hall, on Thursday, Oct. 3d. to take into consideration the Bill introduced by Sir James Graham, "for the better regulation of medical practice." Dr. Stolterfoth in the chair.

After a single leading resolution, a petition was drawn up and adopted, in which the meeting declare, that whilst fully sensible of the anomalous condition of the medical profession, and heartily concurring in the expediency of its revision by the legislature, they still "deprecate in the strongest terms that principle of the Bill which, by removing the stigma of illegality from quackery, throws open the practice of medicine to every unqualified person, as a measure disastrous to the public welfare, and more particularly to the poor, who are utterly incapable of discriminating between the ignorant pretender and the regularly qualified practitioner.

"They farther believe some peal check upon the practice of the unqualified, of easy application, essential to the efficiency of any legislative enactment.

"Though they approve of the establishment of a supreme Council of Health, they cannot but view the constitution of the Council as highly objectionable, none of its members being sufficiently interested in protecting the interests of the general practitioner or licentiate of medicine.

"The proposed system of registration, to be really useful, they think ought to be imperative."

They are still further of opinion, "that any measure of medical reform which does not include the chemist and druggist, who has gradually been occupying the position of the *apothecary*, will be imperfect and inefficient; and that as pure medicines are absolutely necessary to the practice of physic, and much suffering and loss of life annually occur from the present uncontrolled sale of drugs, it is highly expedient to compel all vendors of them to give proof of their knowledge of the qualities and uses of the articles they deal in."

We think the suggestion here made in regard to the chemist and druggist a highly important one, and well deserving careful consideration.

At a meeting of physicians practising in York, and the West Riding of York-

shire, held at Normanton, on Thursday the 17th of October ult., for the purpose of adopting a petition to Parliament on the subject of Sir J. Graham's Medical Reform Bill, Dr. Belcombe, of York, the President of the Association, in the chair, it was determined that a petition be presented to each House of Parliament, in which the meeting declare—

"That they received with the liveliest satisfaction the announcement, that a Bill for the better regulation of medical practice throughout the United Kingdom had been introduced into Parliament, under the auspices of Her Majesty's Government.

"That they highly approve of those parts of the Bill which recognize the preservation of the existing medical institutions, and different classes of medical practitioners, and, at the same time, provide uniformity of qualifications, and equality of privileges, amongst all practitioners of the same class in the three kingdoms.

"That they also fully admit the necessity of some central and controlling body, such as the proposed 'Council of Health,' for the responsible government and harmonious operation of the several medical establishments.

"Believing that the Universities of the United Kingdom are fully competent to ascertain the amount of scientific knowledge, and professional acquirements, of those who are candidates for medical degrees, they pray that that clause of the proposed Bill should be withdrawn, which renders it imperative on all persons who have graduated in medicine in one of the Universities of the United Kingdom, to undergo examination before a College of Physicians, such requirement unnecessarily complicating the tests of professional competence, diminishing the real value and respectability of the honours conferred by the Universities, and involving undue concession to the several Colleges of Physicians.

"They further pray, that physicians should be required to have applied themselves to medical studies during at least seven years, and have attained the age of 27.

"They approve of all legislative discountenance of illegal practice, and humbly suggest that an inquiry be made into the operation of the laws now in existence against such practice in foreign countries, and in the United Kingdom.

"Finally, they pray that such other desirable modifications in the details of the proposed measure may be introduced, as may tend to realise the reasonable wishes of the practitioners of the United Kingdom, to make it efficient, and to secure from ultimate defeat, a legislative effort, made, as they

believe, with the honest desire of obviating the injurious anomalies of a profession, in whose honour and ability are deeply involved the interests of every subject of these realms."

A meeting of the legally qualified medical practitioners of the borough of Gravesend and its neighbourhood, was held at the Literary Institution, Harmer Street, on the 18th ult.; Dr. Hawkins in the chair.

Resolutions were passed, concurring in those parts of the proposed Medical Bill "which secure a better education, and recognise a higher and more uniform standard of qualification, for the members of the medical profession;" but Mr. Humpage, on submitting the second resolution, regretted that Sir James Graham had ever interfered in the subject of medical legislation at all, and characterised the proposed Bill as "mischievous in its nature." The resolution was to the effect:—

"That the meeting regarded with great disappointment and alarm certain clauses which repeal so much of the Apothecaries' Act as relates to the penalties for practising as an apothecary, without supplying any protection in its stead, and which would thereby virtually throw open the practice of medicine to ignorant and unqualified persons, and deprive the public of all security, and the profession of that protection, to which they conceive themselves, from their numbers, respectability, and education, entitled."

We regret that our space does not allow us to give the observations of more than one of the speakers at length, which were characterised by good sense and discrimination. A committee was appointed to draw up a petition in accordance with the views of the assembly, which then separated.

A very numerous meeting of the medical profession, at the instance of the Council of the North of England Association, was held at Newcastle on the 23d ult.; Dr. Headlam in the chair.

The Chairman, in introducing the business, took occasion to speak of the formation of the Association, five years ago, in support of the rights and privileges of the profession. Its labours, combined with those of other associations, had not been in vain. The public were now well informed upon the question, and saw that medical men had no selfish motives in their agitation, but aspired only to raise the character and usefulness of the profession. The Government of the

country had also been roused to action. A Bill had been introduced to the consideration of the Legislature and of the country. For the first time the Government had acknowledged the medical profession as a useful institution, and its title to promotion and protection. The Bill was defective, but he saw in it a basis of sound medical legislation. Fundamental principles had been laid down, on which some measure of reform must ultimately be carried out. The introduction of the Bill would necessarily lead to extended discussion, and the public would see, more and more, that it was of greater importance to them than to the profession that medical reform should be successful. The foundation of that reform should be, in his opinion, the legislative provision of a properly educated body of medical men, and the due protection of them in the exercise of their profession.

Dr. Charlton, the Secretary of the Association, then read a Report from the Council.

Dr. Brown, of Sunderland, moved the first resolution, thankfully acknowledging the obligation conferred upon the profession and the public by the Government, and expressed his conviction, founded on the candid spirit in which the Bill had been received in the provinces, and on his knowledge of the profession in his own district, that the resolution would receive the unanimous concurrence of the meeting. The Government might not have embodied in the Bill all that was required, and they might have introduced some provisions which it would be well to reject; but, in his opinion, they had behaved fairly, and even handsomely, to the medical profession and the country. The proposed measure, he was glad to find, would make the profession virtually a Government department. It proposed to establish a Council of Health and Medical Education. The Government, in his opinion, had too large a share in the construction of the Council. The connection of the profession with the state would be too subservient: it would utterly deprive them, as a body, of self-action; and the general practitioner, having no indirect control, even over the election of the Council, had especial cause to be dissatisfied with the proposal. The other grand defect in the Bill was the complete impunity which it gave to unqualified practitioners.

Sir John Fife, in moving the second resolution (approving of many of the provisions of the Bill, but declaring that, as a whole, it would be more injurious than beneficial), commended the proposal to require a heightened and uniform qualification to practise, but was of opinion that the measure would place the profession in a worse situation than the present. Its fundamental defects were the total absence of all representation of the great body of general prac-

tioners, the most laborious and useful class in the profession, and the omission to impose any direct, or positive, or severe restraint on empiricism. It did seem most extraordinary, that in a country where no man could sell spirits without a license, and where a spirit-vendor must give guarantees of his respectability, any man, the most illiterate and unprincipled, was to have full liberty to take charge of the health, ease, and lives of the people! He hoped the Government would consent to the amendment of their Bill, and thereby entitle themselves to the gratitude of their country.

Mr. Greenhow, of Newcastle, the mover of the third resolution, thought there could be no question as to the desirableness of a presiding body. But he could see no reason why, in the proposed Council of Health and Medical Education, exceptions should be made from the spirit of our free constitution and form of government, derogatory to the honour of the medical profession. It was a poor compliment to say, that they had not sufficient intelligence or honesty to choose their representatives and rulers. It was intended to form them into a great corporation or guild; but the privilege usually enjoyed by incorporations in this country, of electing their governing bodies, was denied to the members of the medical profession, their just claims having been totally overlooked by the framers of the bill. Not only was there no representation accorded to the general practitioners of the empire, but the physicians and surgeons would also be virtually unrepresented, the election of the six physicians and surgeons being confided to the colleges of the three kingdoms, who would doubtless make choice of members or connections of their own self-elect councils. He was inclined to think, from the conduct of the government, that they would feel disposed to listen to the petitions of the profession, and concede their claims to be fairly and fully represented.

We have also intelligence of the formation of a standing committee out of the Liverpool meeting, and that very courteous and satisfactory answers had been received from Sir James Graham, the four Members of the County, and the two Members for the Borough.

RESOLUTIONS

Relative to the Bill for the better Regulation of Medical Practice, adopted by the Royal College of Physicians of Edinburgh, at an Extraordinary Meeting, held on 11th October, 1843.

1st, THAT the College testify their satisfaction that the Bill for the better regulation of Medical Education and Practice, so long expected, has at length been laid before the

House of Commons, and has had a first reading.

2d, That this satisfaction has been increased by the knowledge, that the two great principles of the measure, viz. a uniform standard of education and qualification, and the abolition of all local privileges, are those, for the recognition of which, the College have on various occasions contended.

3d, That the principles now specified, if carried fully into effect, would confer a great benefit on the Profession and the Public, and would remove the evils and remedy the abuses now existing, and of which, for a long time past, there has been too good reason to complain.

4th, That in thus providing the Public with a supply of fully qualified General Practitioners, the College are of opinion that Government is undertaking all that can be properly attempted by legislative interference.

5th, That the College have, with regret, observed that the part of the Bill which proposes to abolish the practice of prosecuting unlicensed and unqualified practitioners, has given rise to great alarm and a good deal of opposition. The College are inclined to doubt the practicability of restraining unlicensed practice by penal enactments, or the expediency of attempting to do so by such means, and in this view they are strengthened by the fact, that such powers, although vested in some of the public bodies in Scotland, have for many years been allowed to lie dormant without any practical inconvenience. But notwithstanding that these are the sentiments of the College, yet, if it shall appear that it is the desire of a large proportion of the intelligent members of the Profession to attempt to restrain such Practitioners by penal enactments,—rather than endanger the final success of a measure otherwise so beneficial, the College are disposed not to urge strongly their own opinions on this head.

6th, That while the College approve most cordially of the general spirit and principles of the Bill, they allow that in various details it may be desirable to introduce certain changes and modifications not affecting its principles or leading details, and which, so far from impairing the efficacy of the measure, would tend materially to facilitate its practical application.

7th, That the best thanks of the College be conveyed to Sir James Graham for the trouble and attention which he has bestowed in the preparation of this Bill, accompanied by a copy of the foregoing Resolutions, and an expression of the hope entertained by the College, that the measure may be, at an early period of the ensuing Session of Parliament, brought under the consideration of the Legislature, and finally passed into a law.

R. RENTON, *President.*

Report by the Royal College of Surgeons of Edinburgh on "A Bill for the better Regulation of Medical Practice throughout the United Kingdom." (Approved of, 4th October, 1844.)

THE Royal College of Surgeons of Edinburgh have observed with the greatest satisfaction that the grievous impediments to the practice of the healing art, arising from the faulty state of the laws affecting the medical profession, of which the College have so long unavailingly complained, have engaged the attention of Her Majesty's advisers; and that a legislative remedy, proposed by them, has been read a first time in Parliament, and has been printed for the information of all who take an interest in the subject of it.

It is satisfactory to the College to discover that the proposed bill is based on the great general principles which they have so repeatedly urged upon the legislature as being of paramount importance and necessity—viz. uniformity and sufficiency in the amount of education required of candidates for medical qualifications; uniformity and sufficiency in the strictness of the examinations to which such candidates are subjected; and uniformity in the privileges to which successful candidates are introduced, in whatever division of the United Kingdom their education and their qualifications may happen to have been acquired.

It is also a leading and a most important principle of the bill to give to the persons thus qualified the advantage of exclusive eligibility to medical offices in hospitals and other public institutions, and to give to the public the advantage of knowing what practitioners are qualified, by the registration and publication of their names at stated periods.

It is the opinion of this Royal College that no measure of medical reform ought to be satisfactory, either to the profession or to the public, which does not embrace all these general principles, and which does not utterly abrogate those partial and exclusive rights of medical incorporations, which, in certain parts of the United Kingdom, have operated so injuriously as impediments to the selection by the public of well-educated medical men for the performance of professional duties for which they would otherwise have been preferred.

The College regret to find that the proposed bill has been objected to by many respectable medical men, on account of its not containing provisions for restraining unqualified persons, by penalties, from practising the profession. The College consider this matter to be subordinate in importance to the great leading features of the bill already alluded to, that neither of the two opposite views of it ought to be urged in such a way as to en-

danger the measure. On the point itself the College have seen no cause to alter an opinion which they expressed *unanimously*, in a report which they published four years ago; an opinion upon which they have uniformly acted for a very long term of years, "that prosecutions will be found to fail in accomplishing the object proposed," that "they may render the unqualified more cautious in practising on public credulity, without making them less successful;" that they may even impart to their pretensions a degree of fame and of importance, which those pretensions would never acquire without such assistance, and "that they may have an unfavourable impression on the character of the qualified, who will be more likely to stand well with the unprofessional part of the public if they have the magnanimity to despise this species of artificial protection, and to rest their claims to public confidence solely upon their professional talents and qualifications." In this view the College find themselves fortified by the concurrence of Sir James Graham, of Mr. Warburton, and of most of those members of parliament who have given attention to the subject. The College trust that the arguments on both sides will be dispassionately considered by the committee on the bill, by whose decision, whatever it may be, they are perfectly willing to abide.

The College further resolved—

1st. That the Medical Reform Committee be authorized to give every possible assistance, by petition or otherwise, to the passing of the bill of Sir James Graham, with such alterations as may seem expedient, provided always that the great principles on which it is based are in no degree impaired by such alterations.

A SKETCH OF THE PRINCIPLES OF A BILL FOR THE BETTER REGULATION OF THE MEDICAL PROFESSION.

BY JOHN DALRYMPLE, F.R.C.S.

THE following sketch I place before the notice of my professional brethren with great and unfeigned diligence. Whether it contains any thing of novelty, or whether it repeats the suggestions of many far abler writers and thinkers upon this subject, I know not; for I have, of design, avoided the perusal of the plans of others, conceiving that some advantage might arise from the promulgation of the independent views of individuals, however humble their place in the profession. Neither

has this sketch been altogether suggested by the bill of the Home Secretary, as lately made known to the public, nor by the various able comments that have appeared upon that bill. Some of the positions, now assumed, were published by me, anonymously, two years since, in the pages of the *Lancet*; but the time is ripe, and the profession apt to the inquiry, whether that bill should be wholly rejected, whether it is susceptible of amendment, or what measures it may be prudent to adopt in its room. The principle of "free trade" in medicine may to some appear fair enough, but the right interpretation of that *cry* is freedom and equal privileges to *those qualified* to practise medicine, and not the unchaining a host of ignorant and designing men, ready at a word to commence their frauds upon the public health, and the private pocket. There can be little question but that the table of the House of Commons will groan beneath the weight of petitions *against* the projected bill, but the question will naturally be asked by its framer, whether the profession as a body have any settled and determined plan to substitute for it. It is with a hope that the medical mind is hastening to this enquiry, that I have been induced to throw together the following observations, enunciating principles of reciprocal protection, which to me, as an individual, appear just and necessary to the future safety of the profession; and with a view not to overthrow, but to conserve and consolidate our existing colleges and boards of national education.

It is necessary to add that these observations have a particular operation only as regards England and Wales, though the extension of the principles to Ireland and Scotland would be obvious and easy enough.

JOHN DALRYMPLE.

56, Grosvenor Street,
Oct. 1844.

I. *Objects of Legislation.*

The protection of the health of the community ought, in justice, to be as much the care of the laws, as that of property, or of the public peace. That this is virtually admitted may be seen in the various sanitary provisions relating to quarantine, drainage of lands, sewerage in large cities, &c. and directly by a recent enactment upon the subject of

vaccination. The government of the country has not only the right, but it is imperative upon it, to prevent as far as possible the public health being endangered by the practice of the ignorant, and the only obvious mode by which this protection can be exercised is, by issuing licenses to practise, and enforcing a previous examination of candidates for the license, as a test of their ability to treat disease.

The basis, however, of all legislation upon the subject of the better regulation of the medical profession should be **MUTUAL PROTECTION**. The demand of an examination test from the person desirous to practise medicine, presupposes a long and painful course of study, notoriously not without its danger to health, and involving considerable pecuniary sacrifices. The medical man who has expended his youth, and impoverished his means, in conforming to the just requirements of the legislature, has the most indisputable ground for claiming immunity from the attacks of unlicensed and unlearned practitioners.

It is equally to the advantage of the non-professional public to be thus compelled to employ only licensed persons, when requiring medical aid, as it is to the government of the country to insist upon certain educational qualifications before it admits the candidate to the enjoyment of public medical appointments. It is already penal for old women to deal in palmistry, or to trick ignorant servant-girls by the arts of conjuration; but the proposed laws contemplate the entire impunity of the more dangerous charlatan, who, outstepping the highwayman, robs at once the unfortunate of his money *and* his life.

The bill lately presented to the House of Commons, by the Home Secretary, in repealing previous statutes, and actually extinguishing the powers of the Worshipful Company of Apothecaries, seeks to remove all those protections from the medical practitioner that at present exist; and by expressly refusing all interference with unlicensed and ignorant pretenders, leaves him in a worse position than before. It is true the proposed bill requires a diploma, or license, from the projected Board of Health, previous to the election of persons to the ill-paid offices held by medical men, but these public

situations are never sought after by the empiric, and are far beneath the aim of his mercenary ambition.

Nor is there any increased security in the fact, that the unlicensed practitioner will be unable to compel payment for his so-called services in a court of justice, for it is well known that, until within the last few years, the general practitioner, duly qualified by law, did not believe he could succeed in enforcing his legitimate demands, and that the physician cannot, at the present moment, legally compel his fee. It is obvious, therefore, that the fear of non-payment for their time and skill never has, nor will in future, deter persons from engaging in the practice of medicine or surgery; and that neither the profession nor the public are protected by this mockery of a bill, from the inroads of the unlicensed medicine-vender, quack-salver, or cheat.

What, then, are the means by which the medical and non-medical public may be *mutually* guaranteed against this danger? In answer to this question, the following observations are submitted in all humility to the judgment of the medical profession.

I. Let every present possessor of a diploma to practise from any of our existing, legally constituted, educational boards, be registered in the order of his standing, and receive a license to practise, and let every future candidate for practice be submitted to due examination before he receives his license, or is entered upon the registry.

II. Let every person entered upon the roll of licensed practitioners pay a small annual *stamp duty* to the government, say £3 or £5.

III. A sum of from 60 to 100,000£ would probably be thus raised to the government, in consideration of which, let the government provide the means for, or sanction the prosecution of, every case of unlicensed practice that shall, upon sufficient proof, be brought before the proper tribunal.

If the facts of medical attendance, coupled with the sale of drugs, or advice given for pecuniary or other emolument, can be proved against the accused, it shall be considered sufficient for conviction to show that the offender's name is not upon the registry, or no defence shall be considered sufficient without proof of his being in possession of a license to practise, and

that he continues to pay his annual duty to government.

IV. For every case of unlicensed practice proved, a fine of £5 shall be inflicted, and after a certain number of convictions a limited term of imprisonment shall undeviatingly follow*.

V. Secret medicines ought also to be dealt with, and it might be provided that such as are already recognised and permitted, should continue the property of the possessor only during his life, and upon the formula or receipt being duly registered at the stamp or patent office. The proprietor of a secret medicine has no juster claim for an extended protection of his nostrum, than the inventor of a new machine, and the law of patents does not permit an hereditary or unlimited property in the discovery.

Board of Health.

VI. To carry out these provisions a "Board of Health" should be established, which, in place of being chiefly the nominees of the crown, as at present proposed, should in fact *represent* the profession at large. It should be their duty to confer the licenses to practise, and to maintain the correctness of the roll or registry of the licensed practitioners.

The Board of Health might also be empowered to strike off the registry such persons as should notoriously offend against the decencies or the science of the profession. Such persons, whose names are still to be found in the annual lists of our colleges, are at this moment regular advertising quacks, venders of secret medicines, and are pulled into notice by the usual arts of advertisement in the newspapers, of bills distributed, and placards posted in the public streets. Persons, also, who have been convicted by a jury of manslaughter or malapraxia (a horrible instance of which has recently shocked the public mind) should be disqualified from future practice, and be struck off the roll accordingly. A precedent for this power is to be found in the profession of the law.

By the constitution of the Board of Health to direct the affairs of the me-

* The present mode of prosecution of unlicensed practitioners is far too costly and too slow to attain the desired end. Such offences should be summarily dealt with before the police magistrate, or before two justices of the peace, in petty sessions assembled.

dical profession, and to confer the licenses to practise, it would appear at first sight that all the powers vested in the existing medical corporations would necessarily cease; that their sources of income would be dried up; and the collections of scientific objects, the work of many years of public and private munificence, be overthrown and scattered to the winds. Such a disastrous event is neither the object, nor would it be the effect of the plan here proposed.

I hold *all our medical corporations* to be useful as they are, and capable by a modified management of becoming the fountains of honour in our general art. I would wish to see them respected for their utility, honoured for their science, and venerated for the high position they might attain, and for the rewards of merit they might be capable of distributing to the most worthy of such distinctions. I would desire to retain unimpaired the Royal Colleges of Physicians and Surgeons, as branches of our national boards of medical education; and I heartily desire to see the Worshipful Company of Apothecaries elevated into a Royal College of Pharmacy, separated from the mercantile department of the present company.

Uniformity of legal rights.

VII. It would be very desirable, and, indeed, the effect of the plan here respectfully proposed, that every person practising medicine or surgery, or both, should receive the same qualification to practise, and that the examination test should be equal for all.

The division of our common profession into subordinate or separate parts is by no means incompatible with an uniform standard of qualification. Although taste, position, opportunities, and the like, may afterwards determine the channel into which an individual may choose to direct his energies, yet it ought to be compulsory, at the outset of life, that he should prove his qualification in any, and all, departments of the healing art.

In this manner an uniformity of the profession would be attained, giving equal rights, conferring equal privileges. The acquisition of honour, wealth, public estimation, would be within the aim of all. No sensibilities would be wounded by unmerited exclusion; no domination of irresponsible corporations

would crush the more modest aspirations of genius. The field being fair and open, extended mental culture and moral worth, crowned with deserved success, would no longer be bolstered up by artificial rank and exclusive privileges.

Distinctive departments of practice.

VIII. Though uniformity of rights be thus secured to the medical profession, yet would I not exclude the possibility of attaining higher honours. While each practitioner would be empowered to select any particular branch of practice, or to combine the whole, he should not be prevented from obtaining distinct honours, which a generous rivalry would accord to those establishing a claim to such distinctions. The possession of superior knowledge, the high cultivation of science (which latter is seldom in our profession accompanied by corresponding pecuniary advantages) should entitle a person to demand, on proof of such acquirements, admission into our present colleges, and to possess himself of their diploma. Some modification, a remodelling, rather than a destruction, of these institutions might become necessary; and I shall have occasion hereafter to advert to this topic, in illustration of the plan I, with submission, present to the notice of the profession.

IX. The title of *medical practitioner* should be understood to signify one licensed to practise medicine and surgery generally; for the art of the obstetrician, oculist, aurist, dentist, &c. are only subdivisions of one general whole, and cannot be safely or advantageously practised, without a knowledge of the laws regulating healthy and morbid function. To obtain such a license as the one contemplated, would demand a higher standard of education than now exists: while the examinations should be *practical* as well as theoretical, a point in which they are at present so profoundly deficient, that the *well-ground* has often great advantage over the *well-grounded* candidate for the professional degree.

Mode of examination of candidates for practice.

X. I would respectfully propose that *all* students, candidates for a license to practise, should pass an examination before *each* of the existing boards of

medical education : but in order to simplify this great object the present Royal Colleges, and the Worshipful Company of Apothecaries, should be restricted to certain departments of science as subjects of examination, the details of which might be hereafter matter of arrangement.

The candidate for a license, prior to being placed on the registry, should be required to produce to the Board of Health certificates, or letters testimonial, of having passed satisfactorily in chemistry, *materia medica*, pharmacy, and medical botany, (midwifery?) before the Court of Examiners of the Worshipful Company of Apothecaries.

2dly. Testimonials of qualification in anatomy, general and special, physiology and surgery, (midwifery?) from the Royal College of Surgeons; and,

3dly. Certificates of examination from the Royal College of Physicians, in pathology, morbid anatomy, therapeutics, and forensic medicine.

The production of these three certificates should entitle the student to a license to practise, and to his being placed on the registry at a proper age, (say not under twenty-three years) and upon payment of a stipulated fee. Each certificate from the examining boards should also bear a fixed fee, which should form a part of the income of each college, and the control and expenditure of these monies should be vested in the council of the respective colleges or corporations.

Fees for examination for license.

XI. It might be provided, also, that though the license to practise would be paid for through separate channels, the total cost need not exceed the present price of obtaining the diplomas of the College and Hall conjointly; for though some of the fees now paid might be lowered thereby, the three establishments would receive an ample equivalent in having a share in the examination of *every medical practitioner*.

The payment of a small annual stamp duty to government, would be compensated to the practitioner in enlarged privileges, and in the conviction that he acquired certain protection in his functions, by the extinction of unlicensed interference. The expenses of the Board of Health, and of maintaining the registry would also be defrayed out of this annual fund.

Diplomas of the Colleges.

XII. It might be further permitted to the existing Colleges to grant diplomas to such persons as, having already a license to practise, desire to exercise a particular branch only, or who aim at the higher distinctions due to a higher standard of education. Thus we might still have our "doctors of medicine" and "masters of surgery," of whom should consist the body of *Fellows* of each College; but of this rank ought the council to be chosen, and the *Fellows* generally ought to be the electors.

It would be possible for the Worshipful Company of Apothecaries, if raised into a Royal College, to which their meritorious exertions of late years in elevating the standard of qualification fully entitle them, to constitute a higher honorary distinction than at present exists; but however that might be, the self government of the Colleges and Hall should remain with the *Fellows* and Members thereof.

Honorary Distinctions.

Suppose a person, already possessed of a license to practise from the Board of Health, gifted with an ardent mind, his opportunities, may be, directing him to the practice of a particular department of his profession, claim those higher distinctions to which extended science would fairly entitle him. He devotes himself to medicine, and offering himself to a further ordeal and test of merit at the Royal College of Physicians, he aspires to the Doctorate; or, desirous to take a lead in surgery, he applied for the honorary diploma of the Royal College of Surgeons—would any be envious of his success? It is his devotion to the acquisition of knowledge, and the proof of his having deserved this reward, that would disarm the cavillers. He acquires no further right, no exclusive privilege; it is this honour alone to which he aspires, and a College composed of such "*Fellows*" would indeed rank high with the general body of the profession, and need fear no rival, no detractors.

Education of Students.

XIII. As, however, it must be granted that the mass of information required for the safe granting of a license to practise is very considerable, as well as of various kinds, it would be prudent and more convenient that all the examinations should not be delayed until

the period of obtaining the license. The time to be occupied in medical studies should be fixed at a minimum period, and at the expiring of certain minimum terms (and not before) the student should be entitled to demand his examination in separate and particular branches of medical science, and on satisfaction of the examiners a certificate to that effect be granted.

The candidate should have the option of choosing the order in which he would present himself at these separate examinations, as the period of his proficiency in certain departments of knowledge might depend in individual cases upon opportunities it would be fair to give him the advantage of*.

XIV. It might, however, be very desirable that even a preliminary examination in the *literæ humaniores* be instituted, without a certificate of competence in which, the student should not be permitted to commence his medical studies.

It must be conceded by every reasonable person, that means of acquiring a knowledge of any science or profession ought to be altogether unfettered, untrammelled by any conventional restrictions; in short, that facilities should be offered at least, and the enjoyment of those facilities rendered as little costly as is compatible with the fair remuneration of the teacher. The present system of a prescribed curriculum, a compulsory attendance of students at certain places, and in defined seasons, is by no means necessary to the acquisition of the required knowledge, and a cursory glance will expose one of the difficulties that now besets the student in obtaining a full and practical acquaintance with the preliminary branches of science.

A thorough knowledge of anatomy cannot be derived from lectures and books merely—only, indeed, by a close

attendance in the dissecting room. The time, however, that ought to be devoted to one of the most essential studies is broken up, and frittered away by a compulsory attendance upon daily and almost hourly classes. The mind of the student is distracted by the too various subjects of inquiry, and his health is impaired by the miasma of the bodies, which decompose upon the table from his want of time to complete sufficiently early the commenced dissection.

Evils of this nature, it is true, have been recognised, and partially, though imperfectly, guarded against, by spreading the whole system of education over a greater space of time; but why, may I ask, might not the student be permitted to make himself master of medical botany, a knowledge of chemistry, materia medica, and pharmacy, or any of the collateral branches of his art, at any period of his apprenticeship, if apprenticeships, as they now exist, are to be continued at all? The examinations he is required to submit himself to, ought to be sufficient test of his proficiency in the sciences, and he ought to be left free to obtain such knowledge in any manner that his means or opportunities place within his power or convenience.

There is, however, one restriction it might be advisable to make, and that is, the student should be compelled to devote a certain definite period to attendance in the wards of a sufficiently large hospital or infirmary of the United Kingdom. However valuable may be the science taught in foreign hospitals; however large may be the experience of their medical officers, and unbounded as are the facilities offered by the continental establishment for the sick, still he ought to be required to attend a certain definite time at our own home hospitals, that he may inform himself of the practice experience has shown to be best suited to disease, modified, as it is, by the peculiarities of our climate, by hereditary dispositions, or the characteristic differences of our British mode of living. With this exception, I would leave the mode or order in which the student acquires his professional information as free and unfettered as becomes the spirit of a liberal and scientific profession.

Licensed Assistants.

XV. Having thus presumed that the

* The order which a student would pursue in acquiring the various branches of science and art necessary to the perfection of his education, would, without being compulsory, soon take a natural course. He would, for the purpose of facilitating his future labours, commence with chemistry, materia medica, &c. and pass the examination of the Company of Apothecaries, prior to the study of pathology and therapeutics, and as these would almost necessarily be the last topics of inquiry, he would previously make himself master of anatomy and the laws of healthy function. Hence, his second certificate of examination would be that of the Royal College of Surgeons. This, I repeat, would be the natural order, and generally followed, without the absurdity of a compulsory curriculum.

candidate has satisfactorily passed his preliminary examinations, and obtained the certificates then granted to him, he should be qualified to require of the Board of Health his general license to practise. But, should circumstances arise which induce the student to delay this proceeding, I would give him the power, by registering his certificates, (gratuitously) to take the place of a licensed dispensing or visiting assistant to a duly qualified practitioner.

XVI. *The administration of the affairs of the medical profession* comprises the formation of a *registry*; the conduct of elections; the granting licenses to practise; the control of the finance department; and the medium of communication between the Government of the country and the medical profession. Hence, these matters must be committed to the direction of a central board or council, to be elected out of the *general body of the members of the profession*.

Council of Health.

It is not a concession to the feelings of the profession, but a right inherent in it, that the election of such a council should be popular and unlimited; in other words, that each person who has qualified himself to practise ought to be qualified to vote for the appointment of councillors, and himself be eligible to become a candidate for the office. The only restriction it would be prudent to make would be the attainment of a certain age (say 30 years), and, as of necessity, the sittings of such a central board must be in London (for England and Wales), the members thereof should be required to reside in, or within a certain distance of, the metropolis.

XVII. Suppose, however, that the council be limited to thirty six, (whereof nine would be *ex-officio members**), and of these nine should vacate their seats annually, it would follow that an annual election of nine councillors must take place, by means of an enormous constituency, and one spread over the whole surface of England and Wales.

Supposing, also, that the form of election were by printed lists forwarded to each elector, the registrar requiring

him to return it signed, and with the names of the candidates chosen by him, clearly designated; still the vast bulk of the constituency would give rise to serious difficulties, and the qualification of candidates would in the great majority of instances be wholly unknown to the electors. Hence the choice might often fall upon the least eligible candidate, and chance too much operate where prudence and judgment ought alone to prevail.

Is it not possible, however, so to construct the machinery of elections, as to obviate many of the difficulties, without dispossessing them of that character of freedom and popularity which ought to be the basis of all representation? I think it is: and to this point I would invite serious attention.

Registration.

XVIII.—All persons already licensed to practise, and all persons who may in future receive a diploma or license to practise, should be registered in the order of the respective dates of their diplomas, and should receive a properly signed and sealed certificate thereof.

It should also be required that an annual registration be made of all persons qualified to practise, with their respective christian and surnames, places of abode, and if required, their honorary titles and distinctions; that lists should be printed under the authority of the Board of Health, and given to each practitioner on demand. That this registration should have legal force, and upon a person proving himself to be the individual named in the authorised printed list, he should require no further evidence of his qualification to practice.

Registration in Districts.

XIX.—The machinery for such annual registration should be as follows. A registrar should be appointed for each metropolitan borough, and for each county of England and Wales, his salary to be proportioned to the size of and the number of practitioners within, his district. He should keep a book, wherein by a certain fixed day in each year he should see that each licensed practitioner in his district signed his name and place of abode. At the first registration of any practitioner he should be required to show his diploma, but, having once been registered, the production of the diploma should not

* The President and two Vice-presidents for the time being of the Royal Colleges, and the Master and two of the Court of Assistants of the Worshipful Society of Apothecaries.

be required while he continued to live in the same district.

Within a month after the completion of the district-registry—the registrar should transmit it to the Board of Health, or Central Council, and by them a complete list of members licensed to practise in England and Wales should be made out and printed—and that too by a definite period in each year. The registry of the preceding year to have legal force until the next list be published. Such a registration, it will be seen, is necessary as a preliminary to all elections.

District Committees.

XX.—The licensed practitioner thus registered in districts, should elect triennially three or five persons, to act as district councils (when in the counties to be resident in the metropolitan town of such county), and who should act as the representatives or *proxies* of the medical practitioners, in the election of the Board of Health; and it will hereafter be shown that other and important duties might devolve upon these district committees, thus :—

1st. Each licensed practitioner would be represented primarily by his proxies in the district committees, and this election would be wholly popular.

2d. It is more than probable, that the persons elected as proxies or district committee men, would be amongst the most eminent and respectable practitioners of the county towns; and it is certain that the character and qualifications of the candidates for so honourable an office would be generally well known to their brethren of the respective districts.

3d. The persons elected, being, it is presumed, the most eminent and upright men resident in the provinces, would feel they held a responsible position in the right of voting for the Central Council, and would undoubtedly be in a better position from their standing and more extended acquaintance, for examining into and judging of the qualifications of candidates for the Metropolitan Council or Board of Health.

4th. The number of actual voters for the Central Council would be reduced to about 300*, and greatly facilitate,

from their comparatively small numbers, the labour and certainty of this the most important of all the elections.

The mode of conducting this election is by no means difficult.

The borough and county registrars should print a list of candidates for the district committee, and send such a list to each practitioner within his district. The list should be returned on or before a certain day with the proper number of names selected, and the paper signed by the elector. His signature being compared by the registrar, or by scrutineers, with the signed registration book, and found to correspond, the votes should be cast, and the individuals having the greatest number of votes would become the district committees, and the *proxies* to vote for the members of the Board of Health.

Election of Council.

XXI.—The same form might be adopted in the election of the Board of Health, the constituency being in this instance the 295 distinct committee men, acting for the 15000 or more practitioners at large. In such a manner a fair and popular election would be secured, and at the same time an intelligent and cautious selection of candidates effected.

The appointment as district committee man would be sought for as an honourable distinction, while the trust reposed in him by the provincial practitioners would ensure the necessary responsibility, since his re-election might mainly depend upon the manner in which he executed his several functions.

Many advantages, I am inclined to think, would arise out of the appointment of these district councils. It would be a return to some of our Saxon institutions, the local self-management of our guilds and corporations, and would obviate some of the evils of centralisation. Complaints against unlicensed practitioners might be examined by them, and if the charges were borne out by inquiry, they might be laid before the magistrate, and conviction insured. I believe also, that breaches of medical etiquette and the quarrels

for the 52 counties of England and Wales, 260 such proxies—add to these the metropolitan boroughs, for the purpose of facilitating the voting of London practitioners (London, Westminster, Southwark, Finsbury, Lambeth, and the Tower Hamlets,) 35, or a total of 295 proxies.

* If the number of the District Committee men be limited to five, for each county, we shall have

that occasionally will arise amongst medical men, would often be referred to these councils, by the disputants, as to a tribunal or court of honour, and their mediation would often compose such differences, and prevent the injurious scandal of a more public course.

Finally, such a board would not unfrequently be consulted by the local municipal authorities upon questions relating to the general health, in cases of epidemic disease, in investigating the causes of unusual mortality, and the like.

ROYAL COLLEGE OF SURGEONS.

To the Editor of the Medical Gazette.

SIR,

You did me the favour to insert some remarks respecting the omission of my name from the first list of Fellows of the Royal College of Surgeons, in which I referred to my claims being superior to those of many gentlemen who were elected, both as regarded seniority, and also from my being the successful competitor for the Jacksonian Prize Essay, on one of the most important subjects in surgery (lithotomy and lithrotomy), and author of other works. On which account, most of the chief medical societies and academies on the continent had conferred upon me their honorary diplomas. The writer of an anonymous reply to my letter, acknowledged that some of those who had strong claims might have been inadvertently omitted, which omissions the subsequent list was intended to rectify; and recommended those who felt themselves aggrieved to wait for its appearance. Inadvertency, however, could not have been the reason of my exclusion, as I had previously stated my claims, and afterwards sent a note to the College to inquire the grounds upon which they were not allowed; to which I received no other answer than that it had been laid before the Council;—and perceiving that my name has been also left out on the present occasion, I considered that I ought to protest strongly against so manifest an act of injustice, although estimating the very questionable honour of the Fellowship at its true value, and being aware that its being conferred or withheld from me could not affect my position in the estimation of the profession.

Your correspondent observed, that all persons who write books are not to be considered as having promoted the advance of science, in which I cordially concur; but as the allusion referred to me, I am perfectly willing that the utility of my publications should be judged from the expressed opinions

of the medical periodicals in this country, as well as in France and Germany, and from the circumstance of some of them having been thought worth reprinting and translating abroad. At all events, I have done my best endeavours to be useful, as far as my opportunities would allow, at considerable loss and inconvenience to myself; having spared neither time nor expense in investigating points of continental practice, which I thought might be advantageously made known to the profession in England.

I am, sir,

Your obedient servant,

EDWIN LEE.

Upper Southwick Street,
Oct. 16, 1844.

PROTEST.

To the President and Council of the Royal College of Surgeons.

Gentlemen,—Feeling confident, after the sacrifices which I had made in my endeavours to promote the science of medicine and surgery, that an impartial estimation of my claims would have entitled me to be named among the first of those who were elected Fellows of the College under the new charter, I cannot but consider the intentional omission of my name from the list which has just appeared, as an affront attributable either to the exercise of an influence hostile to me individually, or of the unfair partiality which in other instances has afforded such strong grounds of complaint; and I protest against the injustice which has been done me by so unwarrantable an abuse of delegated power.

I am, sir,

Your obedient servant,

EDWIN LEE.

Upper Southwick Street,
Oct. 16, 1844.

LIGATURE OF A POLYPUS OF THE BLADDER.

AUGUSTA S., 45 years of age, unmarried, had long complained of pain and difficulty of making water, of bloody urine, &c.; when one day suddenly a dark red body, which bled freely, presented itself between the labia. Careful examination discovered it to be a polypus, the size of a hen's egg, and projecting from the urethra, which could readily be entered with two fingers, and the pedicle of the polypus, which was one third of an inch thick, followed into the bladder, without however getting to its point of attachment. I succeeded in throwing a ligature round it by means of two elastic catheters, and then with a proper canula, constricted it as far within the bladder as I could reach. On the third day the ligature was tightened, and on the sixth the polypus fell off. The patient recovered completely.—*Dr. Thiénnemann, Medicinische Zeitung, No. 9.*

DISINFECTION OF SEWERS, CESSPOOLS, &c.

M. SIRET finds, after a great variety of trials, that a quantity of a mass composed as follows:—

Sulphate of iron . . .	200 lbs.
Sulphate of zinc . . .	25 „
Vegetable charcoal . .	10 „
Sulphate of lime . . .	265 „

in all 500 lbs., thrown into a sewer or cess-pool, has the power of disinfecting it in a very remarkable and effectual manner.—*Comptes Rendus*, Vol. xix. No. 5.

CREASOTE IN NÆVUS MATERNUS.

DR. THORNTON informs us that of all the applications he has tried against nævus (telangiectasis), the most effectual is creasote. He had treated three cases in the course of the year successfully with this substance. It is applied two or three times daily more or less diluted. Excoriation, ulceration, and gradual disappearance of the nævus ensues; the cicatrix had always been smooth and sound.—*Medicinische Zeitung*, No. 9.

RECEIVED FOR REVIEW.

Pouchet (F. A.) *Théorie positive de la Fécondation des Mammifères*. 8vo. Paris. Mandl, *Traité d'Anatomie Microscopique*. 8vo. Paris.

Canstatt, *Die Specielle Pathologie und Therapie*. Bd. III., 4to., 5to., and 6to. Liefering 8vo. Erlangen.

Liebig, *Traité de Chemie Organique*. Tom. III. Paris.

Will, *Horæ Tergestinae, oder Beschreibung und Anatomie der im Herbste 1813 bei Triest beobachteten Akalephen*. 2 Tafeln. 4to. Leipzig.

Davies (John, M.D.) *An Exposition of the Laws which relate to the Medical Profession in England; with an Appendix, containing an ample Analysis of Sir James Graham's Bill*. 8vo.

Thomson (John, M.D.), *Sir J. Graham's Bill repudiated*. 8vo.

Bell (Jacob), *A concise Historical Sketch of the Progress of Pharmacy in Great Britain*. 8vo.

Prichard (J. C., M.D.), *Researches into the Physical History of Man*. 3d edition. Vol. 4 (*Researches into the History of the Asiatic Nations*), 8vo.

Browne (Sir Thomas, Kt. M.D.), *Religio Medici: its sequel, Christian Morals*. A new edition. By John Peace. Post 8vo.

Vestiges of the Natural History of Creation. Post 8vo.

Jeaffreson (William), *A Practical Treatise on Diseases of the Eye*. 8vo.

Fownes (Geo.), *A Manual of Elementary Chemistry, Theoretical and Practical*. Post 8vo.

Ballingall (Sir Geo.), *Outlines of Military Surgery*. 3d edition, 8vo.

Cooper (Samuel), *An Introductory Address to the Students of University College, at the opening of the Winter Session in the Faculty of Medicine, 1844-45*. 8vo.

Facts and Observations in Medicine and Surgery, the gleanings of ten years of active general practice. By John Grantham, F.R.C.S.E. &c. &c.

Principles of Forensic Medicine. By W. A. Guy, M.B. Cantab. Part 3.

A Treatise on Inflammation as a Process of Anormal Nutrition. By John Hughes Bennett, M.D. F.R.S.E.

Guy's Hospital Reports. 2d Series, No. IV. Oct. 1844. Edited by Geo. Hilary Barlow, Ed. Cock, Ed. L. Birkett, J. H. Browne, and A. Poland.

Elements of Medical Police. By Dr. Bisset Hawkins. (An incomplete volume, never finished.)

A Manifesto by the Medical and Surgical Association of the Borough of Marylebone. 8vo. London, Oct. 1844.

NEW CONTINENTAL WORKS.

Landrau.—*De la Kistotomie postérieure, ou déchirement de la cristalloïde postérieure après l'extraction, comme moyen de s'opposer aux cataractes membraneuses secondaires; par F. T. T. Landrau*. In 8vo. Paris.

De Meynard.—*Considérations philosophiques et pratiques sur les maladies de la matrice, les fluxus blanches, etc.; par le Docteur de Maynard*. In 8vo. Toulouse.

Segalas.—*Des Lésions Traumatiques de la moëlle de l'épine considérées sous le rapport de leur influence sur les fonctions des organes génito-urinaires*. In 8vo. Paris.

Hager, M., *die fremden Koeper im Menschen*. 8vo. sewed. Vienna.

Merchand, R. F., *Lehrbuch der physiologischen Chemie*. 8vo. sewed. Berlin.

Marquart, Clamor, *Lehrbuch der practischen und theoretischen Pharmacie*. 2 vols. 8vo. sewed. Mayence.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

Gentlemen admitted Members on Friday, Oct. 25.—T. Dobson.—C. Jewison.—H. Brook.—J. Brown.—W. Bayes.—F. A. Crisp.—W. Bowden.—C. Ede.—J. W. Harrison.—B. Cawthorne.

APOTHECARIES' HALL.

Gentlemen who have obtained Certificates. Oct. 17.—R. S. Rogers, Bristol.—E. N. Sison, London.—R. Barnes, Notting Hill.

Oct. 24.—A. W. Gabb, Abergavenny.—H. Hiller, Sheffield.—W. Fenton.—J. S. Leeson.

WILSON & OGILVY, 57, Skinner Street, London.

THE LONDON MEDICAL GAZETTE,

BEING A
WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

FRIDAY, NOVEMBER 8, 1844.

REPORTS,

By H. FEARNSIDE, M.B.,

OF

CASES TREATED IN UNIVERSITY COLLEGE HOSPITAL.

Cough of twelve months' duration, and failure of the health during the same period. Recent acute attack—pyrexia—little expectoration—after some days sudden increase in its quantity—remarkable fetor of the expectoration—signs of disease in the apex and base of the right lung—development of amphoric respiration, pectoriloquy, gurgling—rapid emaciation—death. Large effusion in the right pleura—gangrene of the right lung—pneumonia of the left one.

GILBERT RAYMOND, æt. 28, admitted into University College Hospital, under Dr. Taylor, June 9th, 1843. A man of ordinary stature, slight conformation, and sallow complexion; he is a shoemaker, which occupation he has always followed; he is a single man; has always had a sufficiency of wholesome food and warm clothing; he is not in the habit of habitually taking either fermented or spirituous liquors. His parents are living and healthy; he has seven brothers and sisters, all of whom are healthy. He is a native of the Puy de Dome, in Central France, where he resided until he was 18 years of age: during this period he has no recollection of having had any illness; his breath, however, has always been rather short, but he was not then, nor has he subsequently, until within the last twelve months, been subject to cough; and he never had hæmoptysis. At the age mentioned he went to Paris, where he remained for nine years. During this period he was (to use his own expression) "very gay," but escaped without any more serious indisposition than a venereal affection. He has been in London about eleven months, and has

resided during the greater part of this time in a rather close and unhealthy situation in the neighbourhood of Golden Square.

Soon after his arrival in this country, an eruption of small pimples appeared upon various parts of his body, and was considered to be of a syphilitic nature by a medical man under whose care he placed himself. He also began to suffer from various symptoms of disorder of the digestive organs, such as a sense of oppression in the epigastric region after taking food. About the same time, also, he began to cough a little, and principally in the morning on first rising, and he became weaker, and less equal to his employment than he had previously been. He sought the relief of these symptoms in empiricism, and attended for some time at the Homœopathic Institution, but without benefit. He then attempted to follow the system of "vomi-purgatives," adopted by some Parisian charlatan, but equally without advantage. About the latter end of April, or beginning of May, being one of a party collected to celebrate the birthday of a friend, he danced much, became very warm, and returned home late at night, and very thinly clothed. He shivered much, both at the time and afterwards; but no other obvious signs of disease appear to have presented themselves in addition to those previously existing. About a fortnight after this date, however, on attempting to carry a load, which he could formerly have borne without difficulty, the exertion fatigued him so much, that he felt its effects for three days afterwards.

About fifteen days ago, as he suffered considerably from dyspnoea, which he attributed to flatulence, he went out for a walk, and, upon returning home, he felt exceedingly weak and languid, had much headache, heat of skin, and thirst, but no increase of cough. At this time he ceased attending to his employment. Three days afterwards he became so ill, that he was obliged to remain in bed. Nine days ago he had rigors; he

began to cough more, and suffer from pain in the upper part of the right side of the chest, about the third costo-sternal articulation; this pain, he states, has since been gradually travelling downwards. From the report of the medical man under whose care the patient was, it appears that at this time there was dullness on percussion over the lower part of the right side, and that a crepitant rhonchus was heard over the same situation, but whether the fine crepitation characteristic of pneumonia or not, is doubtful. Soon after the development of these acute symptoms, the patient began to expectorate a tenacious reddish or brown fluid; a few days ago he began to expectorate suddenly, and in large quantity, a foetid, yellowish-grey, purulent liquid, and this has continued up to the present time. The treatment adopted consisted in the administration of small doses (gr. $\frac{1}{2}$) of tartarized antimony; but the cough has increased much in severity, the breathing has become more difficult, and the patient has rapidly lost flesh and strength.

State upon admission.—His complexion is pale, and rather sallow, and his appearance altogether cachectic. He generally lies upon his back or left side, as resting upon the right side increases the violence of the cough. He is most free from cough when in the erect posture. The surface generally is rather hot. He has no pain about the head, but feels giddy on sitting up; he sleeps indifferently.

He has some feeling of dyspnoea, and the number of respirations is 28 per minute; he has considerable pain over the situation of the costal cartilages upon the right side of the chest; he suffers much from a violent and frequent cough, and expectorates a large quantity (six or eight ounces in twenty-four hours) of a thin yellowish-grey fluid, which contains a good deal of air, and exhales a peculiarly foetid odour.

The left side of the chest appears to move more than the right one in respiration. About an inch below the nipple the right side measures a quarter of an inch more than the left one; the vocal fremitus is greater upon the right than upon the opposite side. Under the right clavicle, and over the upper part of the right side of the chest, the sound on percussion is somewhat dull, and the respiratory murmur over the same space has a bronchial character, especially in expiration. The lateral surface of the right side of the chest is dull upon percussion; and this is observed even when the patient lies upon the opposite side. The sound on percussion under the left clavicle is not very resonant, and the inspiratory murmur in this situation is rough and prolonged. Posteriorly, the greater part of the right side is dull upon percussion, this being

more marked over the upper and lower, than over the middle third. Over the upper half of this side the respiratory murmur is feeble, and accompanied by a submucoous rhonchus; over the lower part of the side it is inaudible. Upon the posterior surface of the left side the respiratory murmur is feeble, but less so than upon the opposite side.

The impulse of the heart is rather strong, its sounds healthy; pulse 96, soft and compressible.

The breath has the same foetid odour as the expectoration; the tongue is coated with a brownish-white clammy fur; he complains of having constantly a disgusting taste in his mouth from the expectoration; he is very thirsty; has no appetite, and suffers much from a sense of oppression about the stomach after taking food. His bowels are rather confined; his urine pale, sp. gr. 1020, and unaffected by heat or nitric acid. He has no pain or tenderness on pressure upon any part of the abdomen; the liver does not descend below the margin of the ribs.

Treatment, and progress of the case.—Tartarized antimony was prescribed in moderate doses (gr. $\frac{1}{2}$), and the patient was placed upon low diet. For some time the only alterations which he presented were, an increase in the amount of debility and emaciation; the cough and expectoration continued as before; there was no pain about the chest, but the patient complained that coughing occasioned pain in the left iliac region. The degree of fever was not considerable, and the physical signs observed from time to time were but a repetition of those remarked on his first admission. His increasing debility indicating the propriety of a change in the mode of treatment, on June 21st the antimony was withdrawn, morphia in small doses ordered to be taken night and morning, and he was placed upon a more nourishing diet. For a few days the change appeared to be beneficial; he slept better, his cough was less violent, the expectoration less profuse, and he repeatedly expressed himself as feeling much better in every respect; but the improvement, however, was delusive, and the further progress of the case will be best exhibited in the daily reports.

June 26th.—The morphia appears to be losing its effect upon him; he does not sleep so well, and coughs more; the expectoration also has increased in quantity, and is equally foetid as when first observed. There is considerable thirst, and heat of skin. The left side of the chest as a whole, moves more in respiration than the right one. On percussion below the right clavicle, the sound elicited is much duller than upon the corresponding part of the opposite side; from the

second intercostal space to the fourth rib, the sound is considerably clearer; from the fourth to the sixth rib it again becomes duller, and below the last mentioned point it is perfectly dull. Over the right infra-clavian space, the respiration is bronchial, and has somewhat of this character from the second to the fourth ribs; in the latter situation, and near the mamilla, respiration is less distinct, and the expiratory murmur is occasionally bronchial, and almost amphoric; a mucous rhonchus is also heard at the same spot. Below the fifth rib the respiratory murmur is inaudible. On the lateral surface of the right side of the chest, the sound on percussion is dull over the upper third, less so over the middle third, and completely so over the lower portion of the side. Upon the fourth rib laterally, respiration has an amphoric character.

Posteriorly there is dullness on percussion on the right supra-spinous fossa; the sound is less dull on the infra-spinous fossa; below the inferior angle of the scapula it again becomes duller, and is perfectly so over the lower part of this region. The vocal fremitus is stronger upon the lower part of the right, than of the left side. Over the right supra-spinous fossa, respiration is less feeble, with somewhat of a bronchial character; over the middle portion of the right back it is strongly bronchial, almost amphoric; over the inferior third it is inaudible. The vocal resonance is strong over the middle third of the right side, and has much of the character of oegophony; over the right infra-spinous fossa, there is also considerable vocal resonance.

The upper part of the left side is less resonant upon percussion than the lower portion.

B. Ferri Iodidi, grs. iij.; *Aquæ*, f3j. *M. fiat haustus, ter die sumendus.*

June 30th.—During a severe paroxysm of coughing this morning, he expectorated about 2 or 3 oz. of blood, and his expectoration has since been tinged with that fluid. He perspires rather freely; pulse 112, and very soft; respirations 28 per minute. (The morphia to be increased from $\frac{1}{4}$ to $\frac{1}{2}$ gr.)

July 1st.—There is perfect amphoric respiration, and pectoriloquy over the lower part of the right side of the chest posteriorly, extending from the seventh to the tenth ribs, near their angles; less distinctly heard near the spine, or upon the lateral surface of the chest, though still very characteristic in the latter situation. There is increased vocal resonance under the right clavicle.

July 3d.—The expectoration is rather less in quantity, more consistent, and it contains some parts which are of a dark purple colour; he coughs less; the skin is hot and dry, especially that of the chest; pulse 132, and small; respirations 32 per minute. During

the last day or two, he has experienced a sharp lancinating pain about an inch below the right nipple on coughing, or turning suddenly. His tongue is covered with a coat of clammy mucus; he is very thirsty; he takes a moderate quantity of food, and with some relish. Below the right mamma, also on the lateral surface of the right side, and about the same level, there is a distinct double friction sound. The amphoric respiration remains as distinct as before, and is more extended. The left side of the chest, both anteriorly and posteriorly, is less resonant than natural.

Omitatur Ferri Iodidum. Applicentur Hirudines vj. lateri dextro.

5th.—He no longer experiences the same pain as before the application of the leeches; the friction-sound continues audible both near the nipple and upon the lateral surface of the chest; in the latter situation, about the level of the fourth rib, some sound of gurgling is heard. The cough is less frequent and severe, and the expectoration is greatly reduced in quantity; the skin is less hot; pulse 112; respirations 28 per minute. The bowels are much confined.

The leeches to be repeated, and a dose of aperient mixture taken.

6th.—He complains that the cough occasions much pain in the lower part of the right side of the chest; the expectoration continues less in quantity, but has a more strongly foetid odour; pulse 122, and small; respirations 30 per minute. The cracked-pot sound is occasionally heard on percussion near the right nipple; the friction-sound is still faintly heard, but the amphoric respiration is less distinct upon the lateral surface of the chest. Posteriorly, the dullness on percussion on the right side of the chest extends from its inferior margin to a little above the inferior angle of the scapula.

Five grains of Carbonate of Ammonia, in combination with *Sp. Æth. Nit.* and Camphor, to be taken three times daily.

7th.—The debility and emaciation appear to be progressing rapidly; his voice has a peculiarly hollow character; the cheeks are collapsed, and he answers questions tardily, and with hesitation. He coughs and expectorates less, but the pungency of the sputor both of the breath and expectoration appears to be increased; pulse 136, small and feeble; respirations 36 per minute. The space over which the amphoric respiration, and pectoriloquy, can be heard, appears to be extending; the respiration is strongly cavernous upon the infero-lateral and posterior parts of the right side of the chest; the friction-sound is no longer heard.

The medicines to be omitted; 2 oz. of wine daily.

8th.—In the after part of yesterday he had a return of the hæmoptysis, coughing up at intervals about half a pint of florid blood; for the relief of this symptom some acetate of lead, and morphia, was prescribed. At present he lies in a half-dreamy state, and appears to comprehend but little of any questions proposed to him. Pulse 130, very small; respirations 36 per minute. The expectoration consists of a brown purulent matter, floating in a thin, frothy, dark-brown, and excessively offensive fluid. The sound of gurgling is heard over the lower part of the lateral and posterior surfaces of the right side of the chest.

9th, 1 P.M.—He is evidently sinking. The face has a leaden hue, and the hands and feet are somewhat livid; he appears conscious, but without power to articulate distinctly; pulse 160, sometimes almost imperceptible; respirations 60 per minute. He was slightly delirious during the after part of the day, and died about half-past 10 P.M.

Examination of the body, 15½ hours after death.

The body was much emaciated; there was no œdema of any part; the muscles on the right side of the chest were rather discoloured.

Head: The cranial bones were thin and soft; the membranes of the brain healthy; there was but little serum under the membranes, and about half a drachm in each lateral ventricle. The vessels on the surface of the brain were rather full; the substance of the brain generally was congested, the red points being numerous, large, and of a deep colour. Weight of the brain 3 lbs. 2 oz.

Larynx: The mucous membrane of the larynx was rather green, but neither injected nor ulcerated; nor was that of the adjacent portion of the trachea.

Chest: The *right pleura* was universally thickened, and especially so over the lower and middle lobes of the lung, and over the lower part of the upper one; there was an effusion of recent lymph upon its surface. The lungs being inflated, it was seen that there was no perforation of the pulmonary pleura. The base of the right lung was adherent to the diaphragm, the connection being not very recent. The pleural sac contained about three pints of highly fœtid, light-yellow serum, turbid from the presence of shreds of lymph. The *right lung* was much diminished in volume, especially in its middle and lower lobes. The substance of the posterior part of the lower lobe, especially superiorly, was soft, of a dark-green colour, and contained a quantity of thin, dark, highly fœtid putrilage; its tissue was heavier than water. The consistence of one part, about the middle of this surface of the

lower lobe, was so much diminished that the tissue was removed by a stream of water; the subjacent pulmonary substance was generally of an ash-grey colour, but at one spot it had a brownish-green hue. The anterior portion of the lower lobe was less soft, dark-coloured, and fœtid; it contained little air, but did not sink in water. The upper lobe was dense, and contained less air than natural; its texture was dark-coloured, and some frothy serum exuded on incising it. The middle lobe was simply rendered denser by compression; it contained some air in its lower part. The anterior and middle portion of the upper lobe was the least dense part of the whole lung; the summit floated in water. Neither tubercle nor abscess was found in any part of the lung. The mucous membrane of the larger bronchi distributed in the lower lobe of the lung was of a uniform red colour, but not altered in consistence or thickness; the mucous membrane in the non-gangrenous portions of the lung was pale. Weight of right lung 1 lb. 1 oz.

The *left pleura* was free from adhesions, nor did its sac contain any fluid. The anterior portion of the *left lung* was rather pale externally; its posterior surface was dark-coloured, especially in the upper part of the lower lobe. On being incised, the lower lobe, especially near its posterior surface, was seen to be of a dark-red colour, and was much denser than natural. The whole lobe contained much frothy bloody serum, but every part of it floated in water. The inferior and posterior portions of the upper lobe presented similar characters. The mucous membrane of the larger bronchi was somewhat red; that of the smaller tubes leading to the inferior part of the lower lobe still more so, being of a deep crimson colour; the lining membrane of the small bronchi in the upper lobe was pale. Weight of left lung 1 lb. 4½ oz.

The *pericardium* was transparent; there was no fat beneath it; there was a small white patch upon the anterior surface of the right ventricle. The walls of the *left ventricle* were rather thin; its capacity small; the endocardium was slightly opaque towards the base of the ventricle; there were a few spots upon the mitral valve; the aortic valves were healthy; the mitral orifice was of natural size. The walls of the *right ventricle* were rather thick; its cavity small; the endocardium and valves were healthy; the orifices of normal size.

The *auricles* were natural in appearance. There was a small fibrinous coagulum, and a little black blood in the right ventricle; no blood in the left ventricle; a little in the left auricle, and much in the right one—principally black and fluid—with some fibrinous coagula. There were a few spots

upon the lining membrane of the aorta. Weight of the heart 7 oz.

Abdomen: There was a slight amount of redness of the lining membrane of the small curvature of the *stomach*. In the great cul-de-sac the mucous membrane was thinner than natural, the veins dark, and the whole softened (by gastric juice). The membrane was everywhere mamillated except in the cul-de-sac.

No signs of disease were apparent upon the external surface of the *intestines*. The mesenteric glands were healthy.

The *spleen* was firm in texture, and of average size. Weight 6 oz.

The upper surface of the *liver* in contact with the diaphragm, and the inferior border in contact with the intestines, were of a dark-green colour; internally its substance was pale. Weight 2 lbs. 14 oz.

The *kidneys* were dark-coloured and congested. Weight of each 4 oz.

REMARKS.—Several difficulties opposed themselves to the formation of a precise diagnosis in this case, especially in the first instance. The account given by the patient of himself was imperfect, often contradictory, and it was only by repeated interrogation that anything like truth could be arrived at; moreover, it was exceedingly difficult to get the patient to speak to *facts*, as he was perpetually obtruding some fancied *explanation* of the symptoms under which he either was or had been suffering. From his statements as to the failure of his health, and the existence of cough during the preceding ten months, from his emaciation and general aspect, and still more from the ascertained existence of some consolidation in the upper part of the right lung; it appeared probable, upon a *prima facie* view, that the case was one of phthisis. But there was also evidence of the recent supervention of some acute disease, and that this was pneumonia was indicated by all which could be made out from the statements of the patient and his medical attendant. Many of the physical signs observed upon his admission tended to corroborate this supposition, viz. the dulness on percussion, and feeble vesicular respiration over the lower part of the right side. Again, the changes which had taken place in the expectoration; its absence, or existence in small quantity only in the first instance, with its subsequent sudden increase, at once suggested the idea of the bursting of an abscess. But nothing has yet been said of the remarkable fœtor of the expectoration; this is a character which may occur in several diseases. In phthisis a portion of lung becoming detached, remaining in some cavity, and, aided by the warmth, moisture, and air of the part, quickly running into decomposition. In empyema, with ulceration

of the pleura, the fluid passing into the lung, and being subsequently discharged by the bronchial tubes. In abscess of the lung the expectoration is often fœtid, and is generally so in pulmonary gangrene. Fœtid expectoration has also been observed in abscess of the liver, opening into the lung—the liver being adherent to the diaphragm, and the diaphragm to the base of the lung. According to Andral and others, in some cases of chronic bronchitis the expectoration is either constantly or occasionally fœtid; and it possesses the same character in many cases of dilated bronchi. The question next presents itself, of which of these diseases was the case in question an example?

Phthisis.—The probability of the existence of some consolidation (probably of a tubercular nature) in the upper part of the right lung has already been noticed; but the supposition that the case was simply one of phthisis, was opposed by the simultaneous existence of consolidation of the lower part of the lung, the sudden accession of acute symptoms, the extent to which the disease had apparently advanced, and the fœtor of the expectoration, which though sometimes observed, is nevertheless rare in phthisis.

Empyema.—This supposition was negatived by the absence of enlargement of the affected side; the patient could lie better upon the left (healthy) side than upon the right one; there was no displacement of the liver, and the vocal fremitus was stronger upon the diseased than upon the opposite side. The dulness on percussion was not altered by change of posture, and the expectoration, though profuse, was less so than it commonly is in empyema.

Hepatic abscess opening into the lung.—This opinion was opposed by the absence of any signs of disease of the liver; there was no enlargement of that organ, no pain or tenderness upon pressure over it, and jaundice had never existed. It must be observed, however, that in some exceptional cases abscess of the liver may take place without any obvious previous signs of disease of that viscus.

Pulmonary abscess and gangrene.—From repeated observation of the physical signs, which are specified in the history of the case, it was obvious that there was disease in the lower part of the right lung: was this abscess or gangrene? The expectoration was at first scanty, then it suddenly became abundant; an occurrence more likely to take place in abscess, than in gangrene of the lung. In six out of twelve cases of abscess of the lung, noticed by M. Grisolle, the expectoration took place suddenly; this, however, is no proof of the existence of abscess, as the sudden expectoration of purulent matter in large quantity, leading to the supposition of the existence of

empyema, may occur from the bronchial tubes alone. On the other hand, the odour of the expectoration, though foetid, was considered to be less so than is usually the case in gangrene.

Dr. Stokes, speaking of the pulmonary gangrene, says, "The only pathognomonic symptom is the extraordinary and disgusting odour of the breath and expectoration. The stench, however, is not constant, for during the progress of a case it may disappear more than once; in some cases the breath is foetid, whilst the expectoration is free from odour."

Laennec states, that in these cases the expectoration is so characteristic "that all these signs" (which he had just enumerated) "would be insufficient without it." He describes it as yellow, ash-grey, verging on green, and of a gangrenous fœtor; or milk-white, gradually becoming greenish-yellow, brown, or ash-coloured, sanious, and purulent. He remarks, "that the fœtor and aspect of the expectoration does not indicate so much the existence of a gangrenous eschar, as a general disposition to gangrene manifested in the mucous secretion of the bronchial tubes."

Andral believes the grey, foetid purulent expectoration to be characteristic of gangrene.

Dr. Williams states, that "fœtor of the breath, and expectoration, is the only physical sign of gangrene of the lung; this" (the fœtor) "may occur, however, in simple bronchitis, and it is only where auscultation has detected signs of pneumonia, that it can be admitted as a proof of the death of a portion of the pulmonary tissue."

It appears, probable, however, that too much value has been attached to this sign: in a diagnostic point of view; for it has been proved by Grisolle, that the grey, or brown, purulent, highly foetid expectoration, may proceed from an abscess; hence cases which have been diagnosticated principally on the strength of this criterion, are as likely to have been instances of abscess as of gangrene.

For the reasons mentioned above, it appeared highly probable, that the case under discussion was one of pneumonia, terminating in abscess of the lung; the subsequent progress of the case, and the additional signs which manifested themselves, tended to confirm this view. The amphoric character of the respiration over the middle and upper part of the lower third of the right side,—the pectoriloquy, gurgling, bottle resonance on percussion,—the extension of the space over which the cavernous respiration was audible,—the appearance of a friction-sound, as if from the approach of the disease towards the surface of the lung,—all these were in unison with the view taken.

The *prognosis* in this case, on the view taken above, could not be favourable. It is true that a very remarkable case of the cicatrization of an extensive pulmonary abscess (verified by subsequent post-mortem examination) is recorded by Dr. Stokes, but this occurred in a strong young man, and probably under other favourable circumstances.

The *treatment* pursued in this case was, first, the exhibition of tartarised antimony, on the supposition of the existence of some pneumonia; this was subsequently discontinued, and a more tonic system adopted; iodide of iron was prescribed, and also morphia, to allay the violence of the cough, and procure sleep: liberal diet was allowed. Nothing more could be attempted than to palliate the symptoms, and this was most effectually done by the morphia. Had the disease been supposed to be one of pulmonary gangrene, perhaps some benefit might have resulted from the exhibition of chloride of lime, wine and opium, as recommended by Dr. Stokes. In a case which occurred under M. Cruveilhier at La Charité, in the spring of last year (diagnosticated principally, if not entirely, by the fœtor of the sputa) a recovery took place under the use of chloride of lime and opium.

The *post-mortem appearances* may be next briefly noticed, principally with reference to the difference between what was disclosed by the autopsy, and what had been anticipated. The right pleura was found to contain upwards of three pints of foetid, turbid serum; the lung was diminished in volume, and adherent at its apex and base; the lower lobe, especially at its posterior part, was found to be gangrenous; no abscess was found, and no tubercle, but the apex of the right lung was firmer and denser than natural.

What evidence was there during life of the existence of a large amount of fluid in the pleura? A considerable part of the liquid was no doubt of recent effusion, but the compression which the lung had undergone, especially in its middle and lower lobes, was adverse to the supposition that the whole had been lately effused. On June 26th, the vocal resonance was remarked to be ægophonic; no importance was attached to this at the time, because bronchophony has often somewhat of the characters of ægophony; but it is possible that a certain amount of liquid existed in the pleura at that time. From July 3d to 6th, a loud friction sound was heard near the situation of the right nipple, excluding the idea of the presence of fluid to any considerable extent. On July 8th, it was remarked that the amphoric respiration, previously distinct upon the lateral surface of the chest, had become feeble, although still heard loudly behind (owing, as was afterwards proved, to the ad-

herence of the lung). At this time the fluid had, no doubt, increased so much in quantity, as to separate the lung to some distance from the lateral walls of the chest. In the early stage of the disease, there was no enlargement of the side, or displacement of the liver; the decubitus was on the healthy side, and the other arguments against the existence of empyema apply equally to the present discussion.

The clear sound elicited by percussion above the right mammary region, may be partially explained by the absence of a corresponding resonant part upon the opposite side, so as to afford a standard of comparison; moreover, the portion of lung which corresponded to this part was the least affected of the whole of the pulmonary tissue.

As already mentioned, no cavity was found in the lung, although all the physical signs observed during life seemed clearly to indicate its existence. This proves, as Dr. Taylor remarked, that cavernous respiration may exist without the presence of a cavity—a fact not distinctly mentioned by writers. Andral states that it is heard only over cavities or dilated bronchi. There must, however, be something peculiar in the condensation of the pulmonary tissue to give rise to it. From the appearances presented in this, and in another case, in which the same phenomenon had been observed, Dr. Taylor supposes that it was owing to the substance of the lung being especially consolidated at one spot; hence the sound of bronchial respiration originating in the tubes is transmitted to the surface with the greatest facility and distinctness by this condensed portion of tissue; the sound is consequently heard louder over this than over the neighbouring parts, and this isolation of the sound conveys the impression of its being produced in a limited spot, and consequently an index of the existence of a cavity.

The sound of *gurgling* was heard in this case: this confirms what has been previously observed, viz. that it is no proof of the existence of a cavity. Andral has observed this, and states that any rhonchus usually originating in a cavity may be produced without one.

Pectoriloquy, also observed in the present instance, has been repeatedly heard where no cavity existed.

The "*cracked-pot sound*" on percussion might perhaps be owing to the presence of a little air in the pleura, generated by some septic process. But as it was only observed three days before the patient's death, when the amphoric respiration had become indistinct laterally from accumulation of fluid, it appears not unlikely to have been due to what Dr. Stokes has remarked, viz. the abrupt termination of the line of dulness pro-

duced by the effusion; for he says, "at this line, particularly in cases of absorption, I have sometimes observed the '*bruit de pot fêlé*.'"

The *abundant purulent expectoration* from the bronchial tubes alone, is worthy of notice. This case also proves that such secretion may take place suddenly, and in large quantity, without the existence of abscess. This has been previously remarked, especially by Dr. Stokes. Again, the amount of the expectoration was influenced by position, just as where there is some excavation,—being greater in the recumbent, less in the erect posture.

Notwithstanding the existence both of the general symptoms, and many of the physical signs indicating the probability of tubercular deposition in the lungs, no tubercles were found after death:—another case, proving the necessity of caution in diagnosing the nature of consolidations of the apices of the lungs. In this case, the condensation of the summit of the right lung was, no doubt, owing to inflammation; the left lung exhibited a specimen of the first stage of pneumonia, which had probably supervened in the last hours of life.

Causes of the gangrene.—In the present case there was tolerable evidence of inflammation having preceded the gangrene, but there was no proof of the existence of intense pneumonia; and this is so far in accordance with general observation. Laennec, who, however, regarded the disease as essentially gangrenous, and regarded the inflammation as a secondary process, describes the symptoms at first as those of slight pneumonia with much depression and anxiety. The invasion is often insidious, and characterised by nothing but general debility. This fact, which was noticed by Frank, is now generally acknowledged. M. Grisolle says, "I have had occasion to see nine or ten cases of pulmonary gangrene, and in no single instance did the disease succeed to a perfectly characterised pneumonia. Of the 305 cases of pneumonia analysed in this work, not one ended in gangrene:—of 70 cases of pulmonary gangrene recorded in the medical journals during the last 25 years, there were at most five which can be fairly pointed to as the sequence of pneumonia." The chances of the occurrence of gangrene are thus in no proportion to the violence of the inflammation; in the cases mentioned, death occurred in seventeen to twenty-four days, a duration which does not indicate any unusual amount of activity in the inflammatory process.

The real cause of the disease in these cases seems to be unknown; the inhalation of some noxious gases has been known to occasion it. Dr. Copland considers that it is doubtful whether it is due to the intensity of the pul-

monary congestion, or to the morbid state of the patient, or both. Dr. Stokes makes a similar observation, and remarks, that in all the cases which he had seen, the patients had been long addicted to the use of spirits. In the case upon which these comments are founded, the patient had been out of health for some time previous to the attack which terminated his existence.

ACESIUS :

A SURVEY OF THE ETHICAL BEARINGS OF
MEDICINE.

By C. F. H. MARX, M.D. &c.

(For the *London Medical Gazette*.)

[Continued from p. 117.]

TO JOHN COAKLEY LETTSON,—
You published a learned discourse on the state of medicine before the Trojan war*. I do not, however, intend this letter for the edification of historians—a class with which you did not identify yourself—but for the thoroughly upright man, which I am led to believe you to have been, from the tenor of your writings at large, and especially from the character of your biography of Fothergill. Such a man is the best in the world to speak with on the import of the history of medicine.

Doubtless you had occasion in life to exercise your acknowledged spirit of charity and toleration, even in larger measure than appears upon the face of any extant record; and I therefore calculate beforehand on your friendly indulgence. You yourself declared, that in the world of phenomena, as in that of sense and of thought, there must be endless variety; as no two leaves can be found on the same tree that are entirely and in all respects alike, and as no one of them can be truly said to be more perfect than another, so is it with human opinions, and also with the conclusions of the heart. You reckoned no fewer than 2000 religious communities†.

You did battle manfully on the side of true medicine against quackery‡, and raised your voice in favour of distinguished merit among the members

of your profession,—of Jenner, for instance, and his vaccination*. Might I venture to express myself figuratively, I should say, that even as you were born in a small islet of the great Atlantic ocean, so had your spirit and your house remained the quiet home of pure humanity amidst the troubled waters of London‡.

Such a man deserves to sit in the general human council of the Amphycitones, as more than the mere man of learning. I, at least, feel myself impelled to turn to you, and communicate with you upon a few points connected with the history of medicine.

Polybius says:—"As a living thing deprived of its eyes becomes useless, so history that is void of truth is a mere useless narrative." But it appears even as difficult to discover what the truth was, and at second-hand, as it is to supply it originally. As the child believes the tale, so does the common reader believe all that historical books contain; the critical inquirer, on the contrary, is content when he meets there with a comprehensive, or even with an entertaining narrative.

In medicine, one would think that it must be least of all difficult to give undisputed or indisputable facts; inasmuch as the business there is not to penetrate the hidden motives of mankind, and to unravel the tangled skeins that interest and passion felt together, but merely to exhibit discovery and special views in their progress. Still, as this narrative is a portion of the spirit of man, so is it dependent on that for its good and its evil properties. The kind of evidence, too, might lead one to anticipate, that in the history of medicine the unquestionable, the positive, would find a place, seeing that even inanimate things bear witness to the facts; for have we not the Memoirs

* Immediately after the House of Commons had passed its vote of £10,000 as a reward to Jenner, for the discovery and propagation of vaccination, Lettson wrote to him as follows: "I was truly chagrined on seeing the niggardly reward voted by the House; and had double that sum been asked, it would have been granted: however, as an individual, I am not disposed to stop here; but immediately to set on foot a subscription that should invite every potentate and person in Europe, America, and Asia, because every avenue of the globe has received, or may receive, your life-preserving discovery. This subscription should not be for you, but it should be a fund the interest of which should be forever devoted to the name of Jenner."—(Baron's Life of Jenner, vol. i. p. 517.)

† Little Van Dyke, near Tortosa.

* History of the Origin of Medicine. London, 4to. 1778.

† Obs. on Religious Persecution. Lond. 1800. Obs. preparatory to the Use of Dr. Mayerbach's Medicines, ib. 1776. The Second Edition, with an Engraving of the Water Doctor from Teniers.

‡ Humb. designed to promote beneficence, temperance, and medical science. 1798.

of a Walking-stick, which accompanied many distinguished physicians, one after the other, in their rounds among their patients, and in their own round through life*. All these means and accidents are, nevertheless, no helps or surties for the truth.

Autobiographies, in fact, supply a fair sample of the style in which *authentic* history is compiled. Who so fit to tell the tale of his life as he who has lived it through, as the writer himself, and that all the more certainly when he is universally acknowledged to have been a thoroughly upright man? Is it even legitimate to entertain any doubts in such circumstances?

One of the most sterling medical men with reference to character that ever lived was undoubtedly J. A. H. Reimarus. You remember him, perhaps, as the discoverer of belladonna as a means of widening the pupil of the eye†; and you may even have heard of his father, the rector of Wismar, and author of the celebrated book on the instincts of animals.

Our former colleague, J. A. H. Reimarus, took a great interest, as you did yourself, in all general propositions having reference to the welfare of mankind, and also in useful inventions of every kind. He it was who first thought of contending with the lightning‡; and he was zealous in his denunciations of all prohibitory and restrictive bye-laws in guilds and corporations§; he was incessant in his efforts to make his native Hamburg aware of the advantages at-

tending a liberal and well ordered constitution*.

This blameless man, who says, that not once in the course of his life had he suffered himself to state an untruth even in jest, nevertheless wrote in his 84th year as follows: "The French have been compelled to evacuate Hamburg; I have returned to the desolated, but still my native and freed city, and have been embraced by many friends."

Will not every one believe that all this happened even to the letter as it is narrated? Nevertheless in the postscript of another we find these words: "In his autobiography he saw his return (from Ranzau whither he had retired), as granted to him, and spoke of it as having already taken place. Providence had ordered things otherwise. A friendly hand must here correct the manuscript."

As children to exercise themselves in speech and thought frequently narrate events as having come to pass that never happened, without the most distant purpose to deceive, so do writers sometimes exercise their faculty of writing. The narrative is frequently much less the mature fruit of long and laborious research, composed with a view to compel the suffrages of real judges in such a case, than the hastily conceived and rapidly indited page thrown off to excite surprise, or to make a momentary impression on the mind of the public at large. The historical in this way is brought to approximate the hysterical. The *intaglio* of the accomplished observer and collector is often used by the ready penman for making a cast from in *relief*. His business is to make his work look as much like a foundling hospital as possible, where the parentage of no individual can be known; nevertheless it very commonly shows like an orphan asylum in the end,—it still bears unquestionable evidence, at all events, of the poverty of its immediate origin.

Should the historical chronicle, through want of fidelity, become a scandalous chronicle, it is even with it as with the poison-tree, in which the constituent proximate principles are those of the majority of the most innocuous substances, but where a trifling addition of antihiarine stamps it the deadly upas.

* The Gold-headed Cane, by the late Dr. Mac-michael. 8vo. London, 1828.

† He himself says (Autobiography, Hamb. 1814, p. 33): "An accident by which a quantity of belladonna juice was spirted into the eye and produced a remarkable paralysis or dilatation of the pupil, led me to think that it would be useful to employ the same substance before proceeding to the operation for cataract: the whole extent of the lens is thereby rendered distinct, and the instrument can be guided in the interior with much greater safety." Daries, to whom the accident alluded to happened, made it known in his Inaugural Dissertation, published at Leipzig in 1776.—Vide Baldinger's Sylloge, vol. ii. p. 58.

‡ Von der Blitz-Albeitung, 1768. He says himself: "I showed that the lightning followed the metal for a distance without passing to other bodies." So early as the year 1769 the Jacobithurme, or Jacobsteeple, was provided with a lightning conductor.

§ Inquiries into the presumed necessity of an authorized College of Physicians and a code of Medical Regulations, 1781 (in German). "I hold it not advisable," he says; "determinate rules, and laws forbidding this and that, I believe to have been ever inimical to the progress of knowledge; all powerful remedies have been discovered by chance, or by persons without science."

* Sketch of a Plan of General State Education, Hamb. 1803 (in German).

The superficial and careless historian is not merely guilty of treason to confiding openness; he farther multiplies errors, which are then propagated like hereditary diseases.

Mistrust might very fairly be entertained of every one who before undertaking a general theme for development, had not given evidence by one or several special investigations of his fitness for the more arduous task. One is, in fact, not born, only the poet, the leader, the statesman, and the physician, but also the historian. But no one is invested with power and without more ado—by the grace of God, as it were, like a king; every one must ascertain by painful labour, by resolute effort, whether he be worthy to take a flight above the individualities of life, and have an eye that can grasp existence as a whole.

This, in short, is at the bottom of the fact, that we have no historical lexicon which seizes impressions ever in the spirit of the times in which it is written.

As times change, and men change with them, so also do views and the means of expressing them. The verb "to right" (*berechtigen*, in German) simply signifies "to make the right prevail;" but the word *hinrichten*, which has the same derivative meaning, is now used in Germany when we speak of "putting one to death." In Pliny and Celsus, the word *amylum* implies *fine flour*; in Apicius it is a *sauce*; and with us, at present, it is *starch*. *Water-doctor* was the former title of him who pretended to cure diseases by inspecting the urine; at the present time, the term is applied to him who pretends to cure all diseases by means of water. The rat (*Ratte*, Germ.) was unknown to the Greeks and Romans, but the *Ratz* of the Germans (*Glis esculentus*) they fattened in special establishments (*Gliraria*), and ate. We do not now order balsams externally, pouring them into wounds; we prescribe them internally, to check mucous fluxes of various kinds. To express the highest degree of haste and rapidity, the ancients had but such words as *remis et velis*; but what was the speed attained by Cæsar or Scipio, with all his oars and sails, compared with the flights we now perform in our steam-ships and railway carriages? What infinite pains must not a man

now take to ascertain the species of a plant whose virtues are celebrated by older observers! It is altogether doubtful what the "hyssop that groweth on the wall" was; and Storck's observations on the Monk's-hood, published no longer ago than 1762, only become available for any useful purpose when we know that it is the species *Cammarum* (*Aconitum Cammarum*) which he used.

The historian who keeps pace with the times by means of a chronology, must not only do so in all truthfulness, but also in the right way; for even a decennium will occasionally put him to the test. In the wars of the French revolution the tactics of the Allies were good in themselves, but their strategy was no longer available; the Sansculottes always came off victorious, because they never lost time with the usages of war, about which they cared not a rush. They were not stable in their negotiations, but their deeds were also without duration.

When historical writing proceeds from the inward call to undertake the duty, it is always conceived and executed rather upon grounds of reflection and doctrine than of incident and authority. It is by no means necessary that the writer, to give credibility to his narrative, be dry as pumice, or the sands of the desert.

What truly arouses our souls to sympathy, and excites our interest, is still neither more nor less than the apprehension and exposition of the path by which humanity, whether in its evolution as a whole, or in some particular department of art or science, advances towards the better, the nobler, the more perfect; each step in its inquiries, in its volitions, in its struggles, may be likened to the knots in the stem, which, succeeding one another, and coming closer and closer as we ascend, finally expand in the odorous blossom. The idea of a vital spark pervading and to pervade infinity, fans the flame in our own breast into a glow; whilst the mere spectacle of the faded coverings and members of the past sends a frosty chill to the heart. Even so do the Pyramids, once evidences of active existence around them, now meet the traveller, in the sandy plains of Egypt, like petrified antediluvian trees of the desert. In history, nevertheless, we cannot be satisfied

with a mere display of reflections and outpourings of the heart; it still has need of a broad and firm foundation.

He who has not, led by lofty self-denial, withdrawn himself for years into the quiet of deep and connected study, with a view to immerse himself wholly in his subject, will never produce aught that is independent and original. With the diving-bell of unwearied application he must recover the drowned treasures of ships long sunken; with the Moses' rod of penetrating criticism he must make springs of living water flow from the arid rocks of bygone events.

To draw from original sources is as much as to say that we appropriate the knowledge of the best spirits of times past, that we hold communion with the models and types of literature alone; and whilst we study them on every side, and strive to know them intimately, keep carefully aloof from those who have fashioned themselves only for others. The gleanings of the stubbles is performed by the poor after the harvest has been carried. Indifferent and bad writers are like the mirage of the desert, which, in the distance, looks like a cool lake, but mocks the thirst of him who would draw from it at hand.

Even as little as he is worthy of the name of historian who torments himself with chronicle events, is he deserving of the title of literary historian who collects mere notices of books and old editions. To merit the latter honourable denomination spiritual supremacy over the collected heap is indispensable; independent decision and impartiality to other natures must have been attained. Between him who writes the despatch and him who copies it out, there is a vast difference.

All the world knows that since the appearance of Asiatic cholera, in 1817, hundreds of pamphlets and larger works have seen the light on the subject, few of which promise to meet the requirement of Thucydides, and prove "possessions for eternity." With reference to this subject we already begin to be like those who, after the lapse of centuries, collect the scattered and disjointed fragments of an author: we see that in the multitude of writings, the number that convey any clear conception of the disease, any authentic information of its nature, or that would

prove a safe guide to us, should the pestilence recur, is wonderfully small.

According to the axiom: "*Quisquis præsinitur bonus*," every one who shows himself in types is currently allowed, in the world of books, to be honest. Nevertheless, the truly scrupulous writer—I mean morally scrupulous—he who never allows himself to disguise and appropriate the goods of others, is by no means one of the common phenomena. This led Cuvier* to quote it as an instance of magnanimity in Corvisart†, that he had produced Avenbrugger's work on Percussion as a translation, and not appropriated the matter, and published it to his countrymen as his own!

The writings of him whose sole purpose it is to be named, without regard to the intrinsic value of his production, may be appropriately compared to the broccoli in Rome during the winter season, which smells of the dung with which the gardener, reckless of all but the appearance of the vegetable, has forced it.

To be capable oneself is even as indispensable as conscientiously to admit, and openly to honour, capacity in others. There seems no occasion, however, to go the length of that old maxim which says, "Into the spring from which thou hast drunk thou shalt not cast a stone." We ought to be ready, on the contrary, to express our inward thankfulness for the good we have received from a new thought encountered, from a noble feeling aroused, and bear cheerful witness, both in inclination and in act, to its author for the debt of gratitude and respect we owe him‡.

* Cuvier, *Eloges Hist.* t. iii. p. 372: "La forme donnée à cet ouvrage doit être remarquée comme la preuve d'une noble générosité. M. Corvisart y immolait sa gloire."

† Corvisart, in his translation, takes the same credit to himself, he says: "Je pouvais sacrifier le nom d'Avenbrugger à une propre vanité; je ne l'ai pas voulu; c'est lui, c'est sa belle et légitime découverte que je veux faire revivre."

‡ Walter S. Landor (*Imaginary Conversations*, &c. 8vo. London, 1826, vol. i. p. 74), expresses himself beautifully on this point: "If the ear is satisfied; if at one moment a tumult is aroused in the breast, and tranquillized at another, with a perfect consciousness of equal power exerted in both cases; if we rise up from the perusal of the work with a strong excitement to thought, to imagination, to sensibility; above all, if we sat down with some propensities towards evil, and walk away with much stronger toward good, in the midst of a world, which we never had entered, and of which we never had dreamed before, shall we perversely put on again the old man of criti-

Every medical writer, you will grant me, is already an historian to the extent that he must look into the history of the disease of which he writes, and of the treatment which has been proposed for it: out of the past he apprehends the present; out of numerous foregone particulars, he must compose for himself an image of that which is. But he also knows better than any one else that the *opera omnia* of a man are not the best of him; there is mostly much that cannot be too speedily put away and forgotten. Many, in their desire to have a complete biographical record, show themselves eager to collect every relique of the earliest infancy, even to the dried navel-string of the great man,—this genuine incunabula,—as if from such mummies of the first years or days of life the character and purposes of the accomplished man could be interpreted!

It is by the same spirit of pious regard of the antique that the editors of celebrated works are oftentimes actuated, when they collect and publish every scrap of paper left by their author. They do not reflect that, with regard to contents, such “complete editions” are incomplete, even because they destroy the general estimate which we had been led to form of the author's mind and influence; they render indefinite and hazy what was well-defined and clear before.

To escape personality in this my epistle to you, I have striven to avoid every approach to contemporary allusions, and fear thereby almost to have become obscure.

But as, in the land of shadows you now inhabit, you in all probability have our literary movements presented to you as in a camera obscura, you will doubtless be able to perceive at a passing glance what the weak son of earth can scarcely comprehend with the utmost straining both of his spiritual and corporeal eyes.

cism, and deny that we have been conducted by a most beneficent and most potent genius? Nothing proves to me so manifestly in what a pestiferous condition are its lazarettes, as when I observe how little has been objected against those who have substituted words for things, and how much against those who have reinstated things for words.”

[To be continued.]

RESEARCHES ON GOUT.

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(For the *London Medical Gazette*.)

It has been uniformly observed that persons who indulge habitually in the use of animal food and fermented drinks, and lead at the same time an irregular, sedentary, inactive life, are prone to gout. A morbid plethora supervenes which gives rise to undue tension of the arterial system. The blood is loaded with nitrogenized principles and calcareous salts, and if the kidneys and skin fail in removing these from the system, they are sooner or later deposited upon the synovial membranes and the tendons, or within the arterial walls; in the former as urate of soda, in the latter as phosphate of lime.

The renal secretion is found to deviate more or less from the natural standard. It would appear from the researches of Frommherz and Gugert, that for some time before a fit of gout it contains no uric acid; whereas it is well known that at other periods there is generally a superabundance, so much so, that the urine of gouty subjects is remarkable for holding in suspension and throwing down that acid in the crystalline form. M. Rayer points particular attention to this fact, and a recent opportunity of verifying it was afforded me in the instance of a gentleman, who came from Florence to consult me by desire of Prof. Targioni, of that city. His urine, though pale in colour, and of the low density of 1.015, spontaneously deposited upon the sides of a glass tube, when cold, abundant lozenge-shaped crystals of uric acid. Yet this gentleman, not long previously, had undergone a regular course of the Vichy waters.

If, then, it be assumed that from occasional causes the uric acid be pent up and allowed to circulate with the blood, urate of soda will undoubtedly form. This I ascertained by the following line of research. A certain quantity of the fresh serum of human blood was set to digest in contact with a given weight of uric acid at the temperature of the living body, during two hours. It was then filtered. To the

clear filtered alkaline liquid when cold, a few drops of very dilute muriatic acid were added, whereupon a cloud of white shining particles immediately began to fall down, which proved upon microscopic examination to be well-defined crystals of uric acid. It may be observed that the same dilute acid when added to the pure serum of the blood rendered it unusually limpid. Hence it was evident that some of the uric acid had been taken up and combined with the alkaline albuminate present in the serum.

On repeating the experiment at a higher temperature, the filtered serum, when diluted with water, afforded by the next morning a cloud of glistening particles, which, viewed by the microscope, were seen to be fan-like groups of acicular crystals of urate of soda, as here figured.



These after a while coalesced into little granular masses, resembling those of chalk stones.

Some white tophaceous particles, taken from the last joint of the finger of a gentleman who died of gout, and for which I was indebted to Mr. White, of Westminster Hospital, yielded after being dissolved in hot distilled water a crystalline precipitate identical in form with the preceding.

Further, on adding uric acid to a warm solution of tribasic phosphate of soda (the essential basic alkaline salt of the blood, according to Enderlin, *Annales der Chemie u. Pharm.* Bd. xlix. p. 317) fan-like tufts precisely similar in appearance to the above were obtained.

There can be, therefore, no question as to the possibility of uric acid being converted into urate of soda, through the medium of the serum of the blood, and that at the ordinary temperature of the human body.

It has been conceived that many of the phenomena of gout depend upon a depraved condition of the blood induced by intermixture with the above salt. This view seems the more

plausible, when we call to mind that one form of gangrene, the senile, mostly attacks persons who have previously been gouty, or have led a life of luxury and indolence, and whose system has most likely been generating uric acid in excess; while another somewhat congenerous form of gangrene is met with in individuals, in whose body a slow but mortal poison has been at work, called *ergotine*, consequent upon the prolonged use of bread containing spurred rye. Both of these pathological conditions, however, are connected more or less directly with arterial inflammation, and to that we must look as the predisposing cause. Still, it cannot be denied that the primary irritant source in the former instance may have been urate of soda, in the latter *ergotine*.

Upon perusing an elaborate memoir on chronic arteritis, by the venerable Professor Tommasini, of Parma, published in a late number of the *Annales de Thérapeutique*, it will be seen that many anomalous symptoms characteristic of confirmed gout, are those of inflammation of the abdominal aorta. Thus it is stated that patients who died of that disease alone, complained of flatulence, frequent eructations, sense of pain and uneasiness referred to the epigastrium, besides other dyspeptic and nervous symptoms, more or less akin to those of hypochondria. Might not these facts assist in elucidating some of the rapidly fatal seizures of what is called gout in the stomach, where no trace of disease has been found in that organ after death?

Again, admitting with Prof. Tiedemann that calcareous incrustation is the sequel of arterial inflammation, abundant evidence is to be found recorded by Stoll, Selle, Lettsom, Michaelis, Kreysig, Corvisart, Lobstein, and Hope, illustrating the formation of earthy deposits in the walls of arteries and valves of the heart in gouty subjects.

In articular gout, tophaceous deposition occurs for the most part in the smaller joints, especially such as are exposed to much friction and pressure, as the metatarso-phalangeal and the distal articulation of the great toe. But no part or structure of the motor apparatus is exempt. In a case that recently presented itself to me it existed in the cartilage of the ear.

It has been generally recognised that the same morbid condition which involves an increased formation of uric acid is attended with defective secretory action of the liver. Hence it has been found that whatever stimulates the excretory duct of that viscus, and determines thereby a more or less free discharge from the biliary pores, checks the above formation, and exercises a salutary influence in the gouty habit. Accordingly, Hippocrates advised that purging should be resorted to upon the first motion of the humour in gout. From a thorough conviction of the importance of this principle, I am solicitous to direct attention to a remedial agent which seems to exercise a specific influence over the hepatic function. This is the sulphate of manganese, a neutral salt, whose properties I was led to investigate at the suggestion of Dr. Pereira. Manganese, in the state of proto-carbonate, is present in the waters of Marienbad, Carlsbad, and other German springs, whither gouty invalids annually resort in quest of health; in the state of oxide, it forms one of the normal constituents of the bones. It was first shown by M. C. G. Gmelin, of Tübingen (*Versuche über die Wirkungen des Baryts, &c.* 1824, p. 96), that the manganese salts when injected into the blood-vessels augmented the biliary secretion to such a degree as to produce a deep yellow staining of the coats of the intestines, and of the great vessels in the vicinity. According to M. A. Barbet, (*Journal de Chimie Médicale*, tom. v. p. 534) muriate of manganese forms a main ingredient of a nostrum sold in Paris, under the name of the decostruent powder of Rouvière. This, taken for a few days, is said to procure abundant bilious evacuations.

If a drachm of sulphate of manganese be dissolved in about half a pint of water, and swallowed before breakfast, it will generally occasion after the lapse of an hour or so one or more liquid stools. With the view of testing whether bile was thus discharged to any amount, a portion of the loose feculent matter was digested with strong alcohol, in order to separate the mucus, and thrown upon a filter; a limpid olive-coloured solution was obtained, which after evaporation by a water-bath to the consistence of honey, yielded with the addition of boiling

muriatic acid, a notable quantity of biliary resin, together with a little fatty matter. Thus, unequivocal proof was afforded of the excretion of bile.

Thus salt may be therefore reckoned essentially *cholagogue*, in the strict sense of the word. Its action is prompt, and soon over, nor does it produce any of those distressing and lowering effects which are so apt to follow the exhibition of mercury and antimony in certain constitutions. A retired navy surgeon, labouring under a feeling of weight and tenderness in the region of the liver, dragging sensations referred to the right shoulder, uneasiness about the epigastrium, dull headache, want of appetite, and paleness of the alvine evacuations, afraid to have recourse to mercurial preparations, took by my recommendation the above salt in moderate doses, at intervals during three weeks. The result was complete removal of the preceding symptoms, and restoration to permanent health.

Sulphate of manganese has a cooling and bitter taste, resembling that of Glauber salt. Dr. Thomson (*Chemistry of Inorganic Bodies*, vol. ii. p. 587) says, "it may be administered as a cathartic, in doses of from half an ounce to an ounce." I have always found a much smaller quantity suffice, and should be reluctant to give it to that extent. It acts most efficiently when dissolved in a considerable quantity of water. On particular occasions infusion of senna furnishes a useful adjunct.

I forbear touching upon colchicum. That potent drug we are told suppresses but does not cure gout, and when long continued inflicts serious injury upon the constitution. In many instances it would appear to act as a slow poison. If, indeed, as Sir B. C. Brodie alleges, it stops the biliary secretion, its protracted use must be fraught with mischief. It ought therefore only to be exhibited in urgent cases, and that sparingly.

In order to abate the erethism of the vessels of the gouty circulation, to further the absorption of effused fluids, and to arrest the recurrence of attacks, which, in the long run, lead to distortion and ankylosis, the topical employment of acetic ether and rectified coal naphtha will be found highly serviceable. The former was first introduced to the notice of the profession by M. Sedillot, in the Transactions of the Medical Society

of Paris, (No. x. *Mess. An.* 5) but never seems to have attracted attention here. Acetic ether generally determines a speedy sedative agency in the more acute stage of the malady, when applied with gentle friction over the whole of the affected surface to the amount of half an ounce every twelve hours, provided after each friction the patient is kept warm in bed. In the sub-acute form of the disease, I have witnessed very beneficial effects from simply pencilling over the part with a camel-hair brush dipped in naphtha*. In some instances, indeed, this seemed to have the power of warding off an impending paroxysm. I was first led to try it in gouty cases, from being told by an extensive manufacturer of the article near Birmingham, that affections of the joints were unknown among his workmen, while they were common enough among the operatives of other factories in the neighbourhood.

Coal naphtha is a pure hydro-carbon, almost identical in nature and properties with the naphtha which occurs native on the shores of the Caspian sea, in Persia, and other countries of Asia. The latter, alluded to by Herodotus, has been used from a remote period by some of the nations of the east, against the very ailment in question. Thus, Dioscorides (*Lib. i. c. 85*) says, "*podagris articolorum doloribus lethargisque prodest*"; and Bontius (*Hist. Nat. p. 17*) in describing what he calls "a noble species of naphtha" brought from Sumatra, and highly prized for its medicinal virtues by the Javanese, concludes as follows: "*partibus affectis illitum miraculi instar aegros consolatur.*"

Naphtha topically applied imparts a feeling of warmth, sometimes accompanied with slight tingling. It acts obviously upon the principle of a mild but penetrating counter-stimulant, determining contraction of the capillaries, increase in the rapidity of their circulation, and progressive absorption of liquid effusion. As such, its use is of course contra-indicated whenever there is general excitement of the vascular and nervous system. The influence of counter-irritation over gout was amply demonstrated, though in a rather severe manner, by Sir William Temple, on his

own person, nearly two centuries ago. That distinguished statesman, who pithily designated "gout a companion that ought to be treated like an enemy, and by no means like a friend," heroically applied the Chinese moxa to his foot, and thereby got permanently cured (*Essay upon the Cure of Gout by Moxa, 1677. Works, vol. i. p. 134*). His account of the disease is given with nosological precision, and nothing can be more graphic than the detail of what he felt while the burning cone was in contact with the skin.

Among other local applications from which occasional advantage has been derived, may be enumerated tincture of arnica, and an ointment composed of one part of extract of belladonna, incorporated with eight or ten parts of cerate. Poultices are objectionable because they relax the capillaries.

After extensive experience in the employment of naphtha, I can confidently assert that no instance has ever presented itself of the slightest tendency to what is called "gouty metastasis," that is, the translation or removal of the disease from the extremities of the body to some internal part or organ. It need scarcely be observed that all outward means, to be availing, must be aided by appropriate hygienic and therapeutic measures.

In order to get rid of the œdema which usually supervenes after a fit of articular gout, it is advisable to support the limb in a position considerably elevated above the level of the body, so as to favour the ascending circulation. By this procedure absorption is facilitated. The support, to be efficient, however, ought to be steadily maintained both night and day. Although rather irksome at first, patients soon become habituated to it. An oblong deal box, having the sides a little elevated and sloping, with belts slung across, will be found to answer the above purpose.

As a remedial agent, seemingly endowed with qualities capable of counteracting and removing tophaceous deposition, silicate of potash, the *liquor of flints* of the older chemists deserves a trial. This salt passes through the system unchanged, and can be detected in the urine of animals to which it has been given by the mouth. It exercises a very powerful solvent action upon the urate of soda.

* Care must be had not to confound this with a spirit sold under the same name, used for making hatters' varnish, and lately introduced as a medicine. The properties of the two are quite dissimilar.

I have prescribed it for one or two patients in doses of ten and fifteen grains twice a day, dissolved in six or eight ounces of water, with apparent benefit.

The efficacy of the benzoic preparations in controlling phosphatic deposition, to which gouty people are likewise prone, was shown by me in a paper published in the *MEDICAL GAZETTE* of February 1843; and it, as Professor Liebig states (*Lancet*, June 8, 1844), "the larger the amount of soda which combines with these acids," alluding to the sulphuric and hippuric, "the less comes to the share of the uric acid," it may be inferred that the administration of benzoic acid, will, in consequence of the surplus production of hippurate of soda, necessarily tend to supersede any inordinate formation of urate of soda.

In reference to the surgical treatment of gouty deposition, it may be suggested that when this is unconnected with the articulation, has a pulpy feel, is augmenting in size, distending the cellular texture and skin, and causing inconvenience and deformity, a small subcutaneous puncture may be made with a tenotome at a few lines distance from the tumor, and its pultaceous contents slowly pressed out. If left to itself the concrete mass eventually undermines and ulcerates the integuments, and is expelled amid a more or less profuse suppuration. Under such circumstances emollient poultices ought to be assiduously applied, and the exposed surface freely touched with nitrate of silver. This salt possesses the property of decomposing and disintegrating both the urate of soda and phosphate of lime.

Where, as frequently happens, the ulcerated opening remains fistulous, and gives issue at intervals to chalky-looking fragments, the nitrate of silver may be employed in solution. Sometimes it is the articulations themselves which furnish the tophaceous matter; here no interference is called for, since little or no annoyance ensues, owing to the changes which the constituent parts have undergone.

The following cases will, it is hoped, serve to illustrate some of the principles above laid down.

M. Casey, aged 60, of wan aspect and impaired constitution, while going down stairs upon the 16th of Feb. 1844, missed the step and fell down. The consequence was fracture of the fibula

between three and four inches above the ankle. He came under my care the following day, at the Institution in Gerrard Street, and the limb was put up in splints and bandages in the usual manner.

In the course of twenty-four hours afterwards, he was attacked in the night with severe gout in the foot, the pain extending from the toe up to the knee—a disease under which he had laboured for the last fifteen years. He had from the resident medical officer a colchicum mixture, which produced violent disorder of the stomach, and no relief to the pain. I subsequently ordered some aperient medicine, together with an embrocation of naphtha, by the joint use of which the gouty symptoms were soon mitigated. Progressive union and consolidation of the broken ends of the bone ensued, and after the lapse of a couple of months from the receipt of the injury he was able to move about. That leg is now quite as firm as the other.

The above case furnishes an example of latent gout, roused into activity through an external cause. The disease, however, soon yielded to remedial means, and did not prevent solid ossific union eventually taking place. It may be added that this man has since been threatened with a return of his old ailment, but has uniformly succeeded in keeping it at bay by the timely use of naphtha.

W. Emmett, aged 35, of robust make and sanguine temperament, accustomed to partake freely of animal food and fermented liquors, was admitted under me upon the 27th of May, 1844. Four days previously he was suddenly attacked with pain and swelling of the left knee-joint, accompanied with a distressing feeling of tension and contraction in the tendons of the inner ham-string muscles. When I saw him, the knee was much swollen, and rather tense; it was hot and painful on motion, and there was a reddish blush over the surface. Pressure at the outside of the patella occasioned acute pain. The pulse, skin, and urine, were natural. He had been taking opening medicine. As he peremptorily refused to submit to any local abstraction of blood, or to blistering, and as I ascertained that for the last eight years he had been visited with repeated fits of gout, a disease with which his father and grandfather

had been afflicted, I directed the assiduous application of naphtha.

The use of the embrocation was followed by rapid subsidence of pain, stiffness, and swelling. Is able to walk about to-day without the aid of a staff to lean upon, as formerly. He now complains of swelling and pain of the right wrist-joint, impeding the use of the hand, and which came on unexpectedly in the course of the night. To apply the naphtha to the wrist.

June 1.—Can move his wrist and hand with perfect freedom; the swelling is gone. Says that he felt marked relief after the second time he used the naphtha. There still remained a little stiffness of the knee-joint, which, however, gradually went away without any other treatment.

We have here gout in one of its protean forms, simulating that which under other conditions might have proved a very troublesome affection of the synovial membrane of the knee-joint. Nothing could be more decisive than the effect of naphtha in arresting its progress.

David Reid, aged 53, of short stature, sallow complexion, and emaciated frame, applied to me upon the 11th of June, 1844, under the following circumstances. Complaints of continual pain in right hand, with feeling of heaviness, and also of scalding when touched. There is considerable swelling of the wrist and knuckle. Over the distal extremity of the metacarpal bone is a flat indurated concretion beneath the skin, of the bigness of a French bean, of twenty years' standing. Another tumor, about the size of an almond, occupies the site of the bursa over the olecranon of the arm of the same side, of more recent date.

His appetite is bad; he is languid, listless, and dejected, frequently yawning and sighing; he suffers from flatulence; a wiry vibratile pulsation can be felt in the different arteries of the hand and wrist; the neighbouring veins are much dilated; pulse 80; there is no undue action of the heart; urine is albuminous, of sp. gr. 1.013; pale in colour, deficient in uric acid, but showing a faint acid reaction with litmus; bowels slow.

States that he has been constantly tormented with gout flying about him during the last four months—a disease

to which he has been liable for a period of thirty years; has six brothers, five of whom have been likewise afflicted; is ignorant whether his parents were so; is a shoemaker by trade, and formerly drank largely of gin; has taken so much colchicum at one time and another, that the drug has lost all power in alleviating the disease; it only produces faintness.

Notwithstanding the exhibition of various aperients, diaphoretics, and anodynes, conjoined with the frequent application of naphtha, no distinct amendment ensued till a fortnight had expired. The urine throughout maintained its albuminous character, and its low density, ranging from 1.009 to 1.013. The subsidence of the pain and heat of the gouty articulations was followed by some oedema of the feet and ankles of about a week's duration.

June 26.—He was ordered tencrains of silicate of potash, dissolved in half a pint of water, twice a day.

July 16.—Experienced a febrile attack, attended with painful tension, swelling, and redness of left hand, elbow, and shoulder. To apply acetic ether with friction, and to take a pill containing scammony and jalap.

I saw him again at 9 o'clock, p.m. The ether had promptly abated the pain and tension; the hand now pitted on pressure; the bowels had been freely moved; next day he was convalescent.

22d.—Called to say he feels in better health than he has done for several months. Thinks there is a sensible reduction in the bulk of the chalk stones since taking the silicate of potash; his urine remains unchanged. To take a teaspoonful of sulphur every morning.

We have here an instance of the "lapidosa chiragra," associated with albuminaria; a state of things in which colchicum is highly prejudicial. The intractable nature of the attack may be ascribed to decay of constitution through intemperance and organic disease. The congestion of the veins, which Baglivi reckons a certain precursor of gout, and always persisting during the fit (Barthez, C. I. lib. i.), so conspicuous in this case, is regarded by M. Rognetta as one of the phenomena peculiar to the angioïtis which constitutes the dynamic condition of that malady. Taken

in connexion with the hypochondriac symptoms already enumerated, it would seem to indicate some deep-seated arterial lesion. It deserves notice that under the use of the silicate of potash there was apparent diminution of the tophus.

John Coleman, aged 50, seaman, of short stature, robust make, and active habits, wont to eat freely, but not given to excess in drinking, admitted 21st of June, 1844; complains of racking and gnawing pain in ball and first phalanx of great toe of right foot, which are red and swollen; walks very lame in consequence. Has been tormented in this way during the past fortnight, but last night the pain became so aggravated as to prevent his sleeping; pulse 72, rather hard; skin soft and moist; tongue clean; bowels confined; urine not examined. Had a similar attack last summer, affecting both great toes for the first time; his general health is excellent, excepting at the periods in question; is troubled with flatulence; there is no proof of hereditary tendency; has been taking Epsom salts, and used fomentations.

Ordered Naphtha as an embrocation, and five grs. of blue pill, with five of extract of Colocynth, every night.

June 26.—Says that he feels immediate relief, enduring for four or five hours, after each application of naphtha, and is in all respects better; the redness and swelling are much lessened; sleeps the greater part of the night.

Ordered, of Sulph. of Manganese, 5j.

28th.—The manganese salt acted powerfully, producing a marked beneficial effect in the course of four hours; the swelling and redness are quite gone; no tenderness remains, so that he can walk about in a strong leather shoe; says that he derived such speedy and sure relief from the naphtha, that whenever he perceived any threatening of nocturnal pain, he immediately pencilled over the part in bed, which enabled him to enjoy a sound sleep.

To continue the use of the Naphtha, and to swallow a full dose of Sulphate of Manganese every morning.

He went on taking the manganese salt in moderate doses every morning till the 3d of July, when he was dismissed cured. He applied again as a patient upon the 12th of the month,

complaining of pain and swelling in both of his great toes, which he ascribes to having imprudently eaten a heavy supper and drank a quantity of beer. By resorting to the employment of sulphate of manganese and naphtha, he got well in a week. He was directed to take for a while a teaspoonful of sulphur daily.

This man was of a bilious temperament, and notwithstanding the free exhibition of blue pill and colocynth, no satisfactory remission of his symptoms took place, until the excretory function of the liver had been well stimulated by the sulphate of manganese. The naphtha had a very happy effect in abating the pain and erythematous redness. Habitual indulgence in the use of London beer is very apt to engender gout; the quantity of acetic acid and gluten that beverage contains being prone to sour the stomach and disorder digestion.

Mr. E—, aged 39, short and thick-set, consulted me upon the 9th of Oct. for an attack of gout in the left foot, which had come on suddenly four days before. The back of the foot was swollen; the skin presented a pale rosy blush, and the muscles and tendons were so exquisitely tender, that in order to get from one room into another, he was compelled from want of crutches to crawl on all fours. There was heat of surface; pulse 96; tongue clean; urine not examined; prior to my visit he had been taking saline aperients and colchicum.

His father suffered from gout, and he has had some seven or eight attacks at various times; never knew colchicum fail in relieving him before. Has abstained wholly from fermented drinks during the last four years, having joined that rigid Temperance sect, the Rechabites, but eats heartily, and takes but little exercise.

Ordered to apply Acetic Ether.

By the next day all pain and redness had vanished; there remained only some swelling and stiffness of the foot, for which the naphtha was recommended, and as he had some symptoms of biliary derangement, a dose of sulphate of manganese was prescribed. These served to dispel every vestige of the attack. Shortly after, he had a seizure in the ball of the great toe of the other foot, for which he treated himself.

This case exemplifies the utility of acetic ether in the first stage, and of naphtha in the sequel, for subduing the local affection. One drachm of sulphate of manganese acted here as an emeto-cathartic and diaphoretic, and seemed to remove a considerable amount of general oppression of the system.

For the next case, dated Feb. 1843, I am indebted to the patient's brother, a physician of eminence, and for many years attached to a county hospital.

"Mr. J. S——, aged 56, short stature, robust figure, florid complexion, nervous-sanguine temperament; habits of life active; habits of living not particularly temperate.

"About ten years since first experienced an attack of gout, whilst in a distant colony, the Mauritius, where for ten years previously he had been accustomed to a free course of living, drinking freely of French wines, and indulging also occasionally in brandy and water. Has never indulged otherwise in the pleasures of the table; nor am I aware that he has any hereditary predisposition to the disease.

"Gout first showed itself in the ball of the great toe, and has never been attended by much disturbance of the stomach and bowels. The attacks have been very severe, though of short duration, and in general he has experienced about four of them during the year; some of the larger joints have of late been subject to them, especially the shoulders and elbows.

"The usual practice which has been pursued in his case has been the exhibition of purgatives with colchicum in the first instance, followed by salines and colchicum in more divided doses, using also tepid evaporating lotions, with occasional anodyne embrocations. Since using a naphtha embrocation, prescribed by Mr. Ure, about twelve months since, and which he was directed to apply at the commencement of an attack of pain, he has invariably succeeded in cutting it short, so that he has had no regular attack of gout within that period. His general health appears to be at present better than it has been for several years, nor has he been subject to any attack of headache, or of uneasiness in any other internal organ."

13, Charlotte Street, Bedford Square,
Nov. 1844.

ON THE NATURE AND SEAT OF HOOPING COUGH*.

By J. S. STREETER,

One of the Presidents of the Physical Society of
Guy's Hospital.

(For the Medical Gazette.)

IN the paper of this evening, I propose to bring before the Society one particular subject for discussion connected with whooping cough, rather than attempting a general essay on the complaint. The adoption of such a limit seemed absolutely necessary in order not to exceed the time usually allotted for papers, and to avoid the necessity of entering into a detailed account of the many important and protean complications with which the simple disease is so often encountered in practice.

The subject which I have chosen with the hope of contributing somewhat to the elucidation of this extraordinary complaint, is the nature and seat of the disease. As every theory advanced or advocated requires to be tested by its adequacy to explain the phenomena observable in the disease by its morbid anatomy, and by the effect of remedies which enjoy popular or professional reputation in its treatment, I trust the subject will not be without sufficient practical interest to elicit discussion, and justify its introduction here.

Before my present audience any extended description of the symptoms, progress, duration, and terminations of so common and familiar an affection, would be misplaced and superfluous. For the immediate purpose of this paper it will be only requisite to remind them that the symptoms of the simple uncomplicated disease are divisible into two stages.

1st. The *catarrhal*, marked essentially by irritative and dry cough, somewhat sharper perhaps, but never absolutely distinguishable from that of an ordinary or an influenza catarrh. This stage is ushered in by more or less fever, usually not very noticeable in a child; but in the adult, as far as my observation and inquiry have extended, the headache and general oppression have been rather severe than otherwise.

The 2d, or *hooping stage*, which

* Read before the Physical Society of Guy's Hospital, Dr. G. O. Rees in the chair, November 2, 1844.

seldom commences before the second or third week, is marked by the peculiar convulsive cough, whose paroxysms distinguish and give name to the disease. Each paroxysm of cough is always terminated by the expulsion of mucus from the air passages by the act of expectoration or vomiting, or by a combination of both these processes. After the expulsion of this mucus the mechanical disturbance of the respiration and circulation occasioned by the coughing gradually subsides, and these important functions resume their ordinary and normal state until they are again disturbed by the access of another paroxysm.

On analysing the paroxysm it will be found that it commences with forcible and progressively shortening efforts of expiration, which succeed each other with great rapidity, during which the lungs become as far as possible exhausted of air, till at length they are suddenly replenished by a deep, forcible, and partly spasmodic inspiration, which completely fills every air-cell. During this inspiration the peculiar sound — the hoop — takes place, and is obviously caused by the inward rush of the air through a partially and spasmodically closed glottis, which no act of the will can imitate. The number of expiratory efforts which precede the deep inspiration is greater in the young subject than in the adult, and produces some modification in the character of the hoop.

Each paroxysm of coughing is preceded by a tickling or pricking sensation experienced at the lower parts of the trachea, which gives warning of the approaching fit. This premonitory sensation produces the inquietude and alarm observable in the very young just before the paroxysm, and induces the older to secure the most favourable position for the expulsion of the abnormally saline secretion that is formed by the catarrhal affection of the bronchi which constitutes the disease, and which saline mucus, by its presence in the larynx, where it acts precisely as a foreign body on the sensitive membrane, I regard as the true and exciting cause of the suffocative paroxysms of the second stage.

Before concluding this sketch of the simple uncomplicated disease, it may be well to add that it appears to me unquestionably contagious, and that it

usually attacks only once during life. To the latter circumstance, however, as in the case of the exanthematous fevers, there are occasional and not very unfrequent exceptions. Its occurrence at the adult age is, I believe, less uncommon than is generally imagined, for I am personally acquainted with many adults who have been visited by the disease; among these my brother, who experienced a second attack in the 44th year of his age.

The authors who have noticed or written especially upon this disease, like the names that have been assigned to it, are many. Dr. Forbes, in the Medical Bibliography attached to the Cyclopædia of Practical Medicine, has enumerated no less than fifty-five, while the estimable author of the Dictionary of Practical Medicine—a veritable Hercules in Æsculapian Researches—has filled more than two columns with minion type in enumerating the names of writers on it, and the mere titles of their works. “Tot homines, tot sententiæ,” says the proverb, and, as might be expected, great diversity of opinion has been entertained on the precise nature and seat of the disease. For an abstract of these views I refer to the able works I have just mentioned, and to the special treatises of Dr. Watt and Dr. Hamilton Roe, the only ones with which I am at all familiar.

The opinions advanced by most of these writers seem, for the most part, to be reducible to a few general heads. 1st. That which regards hooping cough as essentially a *spasmodic affection of the air passages* arising from a primary irritation, inflammatory or nervous, of the brain, or of one set or more of the respiratory nerves. This theory is advocated and variously modified in the opinions advanced by Hoffman, Cullen, Hufeland, Jäger, Leroy, Löbenstein, Glibert, Breschet, Webster, and Copland.

Dr. Webster considers the affection of the respiratory organs as secondary, and dependent on a primary irritation, inflammatory in its nature, of the brain or its membranes, or both combined. Most of the advocates, however, of the nervous theory, from Hoffman down to Copland, regard the pneumo-gastric nerves as the primary seat of the affection; but others, as Jaher, Löbenstein, and Leroy, locate the irritation in the phrenic nerves.

Others, again, as M. Blache and Dr. Hamilton Roe, place the nervous affection in both the mucous membrane of the bronchi and in the pneumo-gastric nerves. With this opinion, Albert of Bremen, Pinel, and also Laennec, according to the statement of Dr. Roe, substantially coincide.

2d. That which considers the disease as an inflammatory affection of some part of the mucous membrane of the air passages; an opinion which numbers among its advocates the names of Darwin, Watt, Alcock, Dewees, Dawson, Marcus, Guersent, Broussais, Rostan and Dugès, and in support of which, that of the immortal Laennec, is quoted by Dr. Johnson, in his excellent article in the *Cyclopædia of Practical Medicine*,

Dr. Watt believes it "in all cases an inflammatory disease, whose chief seat is in the mucous membrane of the larynx, trachea, bronchi, and air-cells, possibly attended with a minute exanthematous eruption there. He considers that when mild this inflammation runs its course without materially disturbing the other functions of the body, or even the functions of that very membrane in which it is seated, and that whenever whooping-cough proves dangerous or fatal, it becomes so by the degree of inflammation in the natural seat of the disease, or by that inflammation extending or being translated to other parts." Most advocates, however, of the inflammatory origin of the disease, limit the inflammation to the trachea and bronchi, except Dawson, who confines its first seat to the membrane of the larynx, or strictly speaking to that of the glottis—an opinion, by the way, not widely differing from that of Astruc, who of old describes it as "an inflammation of the superior part of the larynx and pharynx."

3d. That which views the complaint as at first inflammatory and afterwards spasmodic. This opinion has been principally advocated by Desruelles, and adopted by Dr. C. Johnson. Desruelles makes the disease consist in a primary inflammation of the bronchi, complicated with a consecutive cerebral irritation, which by its influence over the diaphragm and respiratory muscles, and over those of the glottis and larynx, changes the simple cough of bronchitis into one of a convulsive character.

4th. That which refers the disease, or at least the production of the peculiar paroxysms of the second stage, to a physical or chemical irritant introduced within the larynx, whether applied from without or after it has been engendered in the blood, or in the secretion of the respiratory organs themselves.

Under this head may be arranged the opinion of Linnæus, who referred it to the presence of minute insects in the air; that of Sydenham, who imputed it to a subtle and irritating vapour in the blood which affected the lungs; that of Boëhrne, and also partially that of Rosenstein, who ascribe it to a peculiar miasm acting chiefly on the nerves; but it is the opinion originated by Dr. Bland, of the Hospital Beaucaire, that I wish to place prominently before the Society, because it is the theory, which my experience leads me, with only a slight modification, to adopt as the one most consistent with the phenomena observable in the symptoms, pathology, and successful treatment of the disease. It was originally published in the *Révue Médicale* for March 1831, and subsequently transferred in substance to the *Lancet*, April 1831; and *Johnson's Med. Chir. Rev.*, October 1831. It, however, escaped the vigilance and industry of both Dr. C. Johnson and Dr. Copland, and is dismissed with a slight allusion by Dr. Roe, because chemical demonstration was wanting.

Dr. Bland considers the primary cause of the disease to consist in an irritation, not an inflammation, of the mucous membrane of the bronchi, under which the glands and follicles of that membrane pour forth a specific secretion saturated with hydro chlorate of soda, the irritation of which, when it reaches the upper part of the trachea and larynx, throws the muscles of the glottis and of respiration into spasmodic action for its expulsion, in a manner exactly similar to any foreign body which accidentally enters the larynx.

From this theory of the nature and seat of the disease I so far differ as to regard the primary affection of the bronchial membrane as inflammatory in its nature, and believe that it will be found on careful observation to be attended by more or less fever of an analogous character to that which attends contagious catarrh or influenza; but to that part which views the pre-

sence of a saline secretion in the trachea as the proximate cause of the convulsive cough which ushers in the second stage, I give my unqualified assent: because I believe it demonstrably true. When, however, the convulsive hooping is fully established, it very commonly happens that symptoms which mark the third, or what may be appropriately termed the complicated stage are developed, and continue to mark the varying and formidable phases of the disease which mostly attract attention in practice. These tertiary phenomena usually manifest themselves—1st, as special lesions of the nervous and muscular systems; 2dly, as special lesions of the respiratory organs; or 3dly, as the more general affections of fever and cachexia, and are present in individual cases in every conceivable variety of combination.

The 1st class comprise—an exalted sensibility, and morbidly susceptible state, of the membrane of the larynx, the pharynx, the epiglottis, under which death from asphyxia may suddenly occur—morbid association of the action of the muscles of glottis and respiration, in consequence of which the cough continues from mere habit, or is reproduced by the most trivial irritation of the air passages; reflex irritation, often passing into inflammation of the nervous centres of the pneumogastric nerves, involving those of the phrenic nerves also; and finally, these reflex affections may extend to the whole of the brain, or to the medulla oblongata and their meninges, and prove fatal by inducing general convulsions or hydrocephalus. All these, be it observed, are pathological conditions of the nervous system which have been so constantly put forward in high relief by the advocates of the nervous theory as proximate causes of the disease itself.

The 2d class of tertiary phenomena include the various congestive and inflammatory affections that result from the mechanical disturbance of respiration and circulation, and the extension of the primary bronchial inflammation to the trachea, larynx, and pharynx, and the tissues of the lungs themselves. Epistaxis, hæmoptysis, and fatal emphysema from extensive rupture of the air-cells, have occurred within my own experience, and have apparently resulted from the mechanical violence of

the cough acting upon tissues previously weakened by disease.

Of the 3d class I have only to observe, that in the absence of cerebral or pulmonary inflammation, the fever of the third stages is always asthenic, and often assumes a remittent type when the cachexia is of a marasmic character.

The evidences of the truth of this theory, upon which I place reliance, are—the testimony of adults, who have been attacked by the disease, to the unusual and excessively saline taste of the expectoration so long as the paroxysms are severe—the resemblance of the expiratory efforts in hooping-cough to those made by the excitomotor system, for the expulsion of a foreign body from the larynx; the very adequate explanation it affords, both of the extraordinary and spasmodic muscular actions which accompany the cough, and of its occurrence in paroxysms after intervals of uncertain duration; and lastly, the key which it furnishes to the chaotic host of apparently opposite remedies that have obtained professional or popular reputation in its treatment.

Of these remedies, we find one group adapted to lessen the original bronchial affection, and favour the expulsion of the offending mucus—as emetics, antimonials, and counter-irritants applied over the chest; another, which acts by altering the quality of the secretion, as the alkaline carbonates, ammonia, and the sulphuret of potass, so strongly recommended by Dr. Bland himself; another, by exciting a new action in the bronchial membrane; and constricting the vessels put a stop to the secretion in a manner perfectly familiar to the physician in chronic bronchitis, and to the surgeon in purulent ophthalmia—the superacetate of lead, alum, common resin, T. cantarides in Bals. Copaiba, tar vapour, and even the inhalation of nitrous vapour, &c. Others, again, as musk, both native and artificial, camphor, arsenic, conium, belladonna, opium, and hydrocyanic acid, are more especially adapted for the nervous lesions; and antiphlogistic measures meet the inflammatory lesions of the third or complicated stage.

The popular remedies are, indeed, so numerous, that one is strongly reminded of the custom which Mr. Pettigrew informs us, in his late interesting

work "On the Superstitions connected with the History and Practice of Medicine and Surgery," p. 73, is common in Devonshire and Cornwall, and some other parts of England, viz. "to inquire of any one riding on a piebald horse of a remedy for the hooping-cough, and whatever may be named is regarded as an infallible specific."

There is yet wanting to complete the whole a chemical examination of the bronchial secretion, to determine the exact nature of its saline constituents. From this, as I have not had the disease, prudence will lead me to refrain; but I shall conclude by expressing the hope that ere long it will be instituted by the advanced chemical pupils of this hospital, under the auspices of the pre-eminently qualified author of the article "Mucus," in the *Cyclopædia of Anatomy and Physiology*: the scientific physician who so worthily fills the chair of the Society on the present occasion.

ANALYSES AND NOTICES OF BOOKS.

"L'auteur se tue à allonger ce que le lecteur se tue à abrégé."—D'ALEMBERT.

Graefenberg; or a True Report of the Water Cure: with an Account of its Antiquity By HENRY HAY GRAHAM, M.D. London, 1844.

"THE combat thickens!" The desire to obtain possession of the ear of credulous John Bull, with a view to get hold of his person, and wring out of his purse some of his superfluous gold, prompts those who study his varying humours to present him with numerous treatises on each of his successive hobbies every winter, pretending to be the sole proprietor of the "arcaneum magnum." For our own parts, we decidedly like this system, and are much edified when "partners" fall out, and each publishes his separate manifesto, representing his former "partner in distress" as an arch impostor. In this way we get some of the "secrets of the prison-house." In one point they all agree, viz. in speaking disrespectfully of Priessnitz, and indulging in every kind of insinuation against him and his establishment; not with the humane intention of warning their fellow creatures against the risk of falling victims to their credulity, but with the sordid

hope of diverting some of the golden funds of his Pactolus into their own muddy streams. True to this aim, there runs through the "*true* report of Graefenberg," a current of innuendoes, hints, some slight, some broad, but all most skilfully introduced, and the whole admirably calculated to impress John Bull with the belief that he will do well to stay at home, and be doused by native *aquarii*. Hence, we are told the process is of British origin (p. 48), and Priessnitz is openly accused of borrowing his plan from Dr. Hulm, (see Appendix to the True Report, p. 155), who borrowed his notions from the work of Sir John Floyer and Dr. Baynard; *argal*, British practitioners should know best how to employ it. And who can wonder that *disinterested* writers should strive to keep John at home, when told that Priessnitz, who is at times called the "inspired peasant"; at others "the philosopher," (p. 122) while at others he is designated by no gentle terms, has accumulated what our contemporary, the British and Foreign Medical Review, calls "solid pudding" to the amount of £50,000, or as Dr. Graham affirms, £100,000 (p. 44.) Thus we have the following: "Those who are desirous of experiencing it will do well to seek out some establishment near at home, rather than undertake a long journey, and submit to all the privations and inconveniences of Graefenberg" (p. 36.) This shows a nice acquaintance with John Bull's weak points; he loves *comfort*, and does not like to submit to privations, especially in his accustomed good cheer. Following up this ingenious plan of giving John praise, we have, at page 42, a most enchanting picture of the company, menage, and diet, at Graefenberg. "*The food at Graefenberg* [these italics are in the original, and well do they intimate how the statement is expected to tell on John's gustatory nerves] is abundant, but of the worst and coarsest quality, such as would be scarcely tolerated in our workhouses. Sour ryebread with caraway-seeds; cow-beef, with scarcely a particle of fat." Read this, John! and stay at home.

Least this should not be sufficient to dissuade John from attempting the "dangers of the sea," it is followed by a statement that scarcely *one* case out of *twenty* is cured. Still "hope springs

eternal" in the sick man's breast; and each one calculates on being the fortunate twentieth, who is to be the object of envy to the nineteen uncured. Therefore, twenty will go. This must not be, so we are next told that three or four years are required for the cure, (pp. 22 and 40). "Four summers, with the length of four long winters" at Graefenberg! But he adds, significantly, "a very few try a second winter," (p. 41). Nor is the company of the choicest description. "Two-thirds of his patients are said to be syphilitic," (p. 59), chiefly young men, who surround new comers, and recount to them the "miracles" that Priessnitz had performed—"for a consideration." "These gentlemen [*italics in the original*] were much in debt for board and lodging, and were clearing off their score by a system of 'puffing,'" (pp. 11 and 141). All this may be insufficient to deter resolute John Bull; there is another hope of doing this by working on his "better half's" feelings of modesty. In a fatal case of an English young lady, who went thither in perfect health, Miss S. S., and who fell a victim to her folly, Priessnitz excused himself from being answerable for her death, by saying: "It was his practice to judge of the inside by the skin, (his most appropriate motto might be, *Te nori intus, et inente*), but that he was restricted in his observations in her case, and therefore could not tell what was going on within-side." He then mimicked the tone of her voice, and her retiring modesty, when he once attempted to remove her bathing dress. He afterwards ridiculed the English ladies for using bathing-dresses at all, so different from the custom of his own countrywomen. And all this was said and done with a sort of acting or imitating their manners, highly amusing to his hearers, who burst out with repeated shouts of laughter." Natural enough on the part of an audience two-thirds of which wore the "corona veneris." Well may Dr. Graham add, "Such is the great, the immortal Priessnitz! Proh pudor!" (p. 55.)

Should all this fail, there remains the decisive "corps de reserve;" the fatal and nearly fatal cases: of the former, the case of Miss S. S. is made a great deal of, being well harped upon throughout the book, and of the latter, the case of Dr. Graham himself, who

adventurously essayed "the water-treatment" for the gout, and having "escaped with the skin of his teeth," narrates his case for the warning of his country men, like those who escaped shipwreck, who suspended their dripping garments in the temple of Neptune,

Indicat invida
Suspendisse potenti
Vestimenta maris Deo,

i. e. the demi-god Priessnitz, (p. 141.)

A careful perusal of the whole of Dr. Graham's book leaves on our minds the impression that, like a young barrister, eager to gain his end, he cites witnesses who prove "too much," convincing us not only of the danger of putting ourselves into the hands of the "illiterate peasant of Graefenberg," but of the danger of the treatment called "hydropathic," in nearly all cases. This was not the object aimed at, as may be gathered from the conclusion: "In the hands of Priessnitz and his followers, it has become a quack medicine—an universal nostrum—and, like every other remedy indiscriminately used, is frequently as productive of injury as of benefit. Used in moderation, and judiciously combined with other remedies, there can be little doubt but the greatest advantage would be derived, especially when united with the occupation and amusement of a large establishment," such as that of ———: our readers can fill up this hiatus.

Note.—We are indebted to Dr. Graham for the confirmation of a suspicion which we entertained and expressed when reviewing (see MEDICAL GAZETTE, last vol. p. 198) the "Hand-Book of Hydropathy" of a self-styled Dr. Weiss. Our point of interrogation after his title of Dr. (?) was quite appropriate. Dr. Graham can bear no rival near the purse of John Bull, and says "such are the men who generally pretend to consummate skill in the use of this their infallible remedy, and who, with the veterinary Weiss, the nephew of Priessnitz, (one of the common bath attendants at Graefenberg), and a host of other Germans, inundate this country, and not unfrequently assume the titles of surgeons and graduated physicians," (p. 14.)

Since we are on the subject of German humbugs, we may remark that more than one writer on hydropathy has addressed Liebig as favourable to that plan. We give them, therefore,

the advantage of his indignant disclaimer.

"The existence of hydropathic institutions—those dens of covetous and rapacious gamblers—where the wretched invalid resorts to throw the dice for health and life; the rise and progress of the homœopathic system, which treats truth with scorn, and bids defiance to common sense, loudly proclaim the need which exists for the adoption of settled principles, definite methods of research, and a systematic arrangement, to guarantee their attainment and retention (in the practice of medicine)."
—Liebig, in *Lancet*, of 29th of June, 1844. Also, in *MEDICAL GAZETTE*, of 5th July, 1844.

The homœopaths court more blows: not content with Dr. Wood's exposure, they have dared him (but from behind the ambush of a careful *incognito*), in sundry pamphlets, displaying

"sounds without sense,

And all the florid glare of impotence,"

to administer a little more chastisement to them, in the form of a *Sequel to Homœopathy Unmasked*, which is well worthy the perusal of our readers. But it is scarcely worth while fanning the dying embers of homœopathy.

MEDICAL GAZETTE.

Friday, November 8, 1844.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

THE RESOLUTIONS OF THE ROYAL COLLEGE OF PHYSICIANS, AND REPORT OF THE ROYAL COLLEGE OF SURGEONS OF EDINBURGH, ON THE MEDICAL BILL.

WE are sometimes rather at a loss for a text to dilate upon in these our weekly lucubrations. In ordinary times it is not even once a week, and at the exact interval from Thursday afternoon, that aught of peculiar interest in the ethics or politics of the medical profession regularly occurs; and to sit down with the purpose of writing an abstract essay upon even the most important topic

never answers the end. The subject must not be abstract, but practical; not of yesterday, but of to-day; not of the "Pyrenean and the river Po," when the reader anticipates the Home Office, Pall-Mall East, Lincoln's Inn Fields, and Bridge Street, Blackfriars, as the theme. We are sometimes at a loss for a text, we say; in these stirring times we have a dozen starting up before us, each more urgent than the other for notice. Some of the most interesting we are almost fearful of meddling with, however: we would not willingly give umbrage to any individual among the many distinguished men who have been our hitherto friends and supporters; but intimately convinced that these our esteemed friends are wrong,—they will pardon us for being so bold,—and feeling ourself with one of "the prime feathers in the wing that moves the world," as our eloquent friend Dr. Marx has it, in our hand, with the very tablets before us, too, upon which the laws that rule the world are written, how can we but in all honour and truthfulness do our best to leave traces there of what we feel mentally persuaded to be the right and the true, and worthy as such of influencing the code that is to govern the class in society of which God and our own free choice hath made us a humble member? We appeal to our motto as giving us a claim to perfect freedom in the discussion of the questions that agitate the medical profession at this really momentous crisis: "Licet omnibus," &c. "Be it allowed to all, be it allowed also to me, to uphold the honour of the medical profession; with power to come before the public, I decline not the *danger* of speaking my thoughts."

The RESOLUTIONS of the Royal College of Physicians, and the REPORT of the Royal College of Surgeons of Edinburgh*, are probably the documents of

* Vide last week's Gazette.

highest weight that lie before us, and that therefore crave earliest attention.

Both of the Northern Royal Colleges are even urgent in their approbation of the measure as produced by Sir James Graham. But they take "The Bill" apart from what we cannot but regard as its inseparable appendix, the New Charter of the Royal College of Surgeons, and thereby make nugatory much, or almost all, that can be said in its favour. Our brethren north of the Tweed can form no estimate of the way in which the profession south of that stream are likely to be affected, are already affected, by it. The distinction into two classes of members in the College of Physicians, proved the cause of bickerings and heartburnings for something like a century or more; and the unhappy idea of introducing the same apple of discord into the College of Surgeons has taken possession of the minds of the instigators of Sir James Graham's Medical Bill. Nineteenth, nineteen-twentieths of all that is most confided in and respected in the medical profession of England, is at this moment cut off from its connection with any legitimate or possible head, or, we ought rather to say, place of shelter for its head; for the brains are in, and active enough; and though it were the head from which the body of the profession was actually severed, we do not remember, when we saw a man guillotined in the Place de Grève in the days of our youth, that the head did much better without the body than the body did without the head;—it was a woful disjunction to both.

Returning to the Resolutions of the Edinburgh Colleges of Physicians and Surgeons;—the Physicians testify their satisfaction that the bill for the better regulation of medical education and practice, so long expected, has at length been laid before the House of Commons; the Surgeons "observe with the

greatest satisfaction that the grievous impediments to the practice of the healing art, arising from the faulty state of the laws affecting the medical profession, of which the College have so long unavailingly complained, have engaged the attention of Her Majesty's advisers; and that a legislative remedy, proposed by them, has been read a first time in Parliament."

The satisfaction of the Physicians is simple: the College of Physicians of Edinburgh, if not a rich, are still a solvent body, and they are not so loud in their approbation as their brothers the Surgeons; they have gone the even tenor of their way, never climbing great heights, and therefore running no risk of suffering great falls. The Surgeons of the North, like the Surgeons of the South, are on the whole a more dashing and ambitious set of men than the Doctors; they come more before the public; their operations dazzle the eye and the imagination; the operation of the physician's dose of jalap goes all the world knows where, and has nothing brilliant about it. With an unusually prosperous state of affairs some years after the late war, the Edinburgh College of Surgeons became ashamed of their dingy domain in Surgeons' Square, and built themselves a magnificent temple fronting one of the principal thoroughfares of the city; they took up a still more conspicuous position than they had yet held. But stone and lime, or bricks and mortar as we say in the south, are costly articles; the College contracted a large debt for its new building, and the necessity of obeying the behests of the Apothecaries' Act of 1815 being more forcibly borne in upon the minds of students, and other circumstances concurring, the number of students at Edinburgh began to fall off; the examinations at Surgeons' Hall fell off in a still greater measure, and at the present time the

College is literally bankrupt, and have actually, we believe, had a proposal made to them by one of their leading members to sell their museum in order to find ways and means to meet current expenses. The "grievous impediments to the practice of the healing art," of which they speak, being interpreted, means nothing more than this; that the Apothecaries' Company kept the sword of the law suspended over the heads of all the men settled in England who held the diploma of the Royal College of Surgeons of Edinburgh. Nay, we rather think it let the weapon fall upon more than one occasion. The abrogation of the Apothecaries' Act is what the Royal College of Surgeons of Edinburgh are bent on. With uniformity of privileges, the diploma obtained in Edinburgh, giving authority to practise in Liverpool and Manchester, in Carlisle and Truro, the Edinburgh College naturally expect that they will be able to recruit their exhausted exchequer, and perhaps find themselves in a position to keep the roof in Nicholson Street over their heads, and even to retain the museum which cost them so much money. We have already explained several portions of "the Bill," and its appendix, the London College Charter; we are happy to supply our readers with an explanation of the diversity of tone assumed by the two Royal Colleges situated in the capital of the north.

The College of Physicians and College of Surgeons alike felicitate themselves in the knowledge that the two grand principles for which they have both long contended, viz. uniformity of education and qualification, are those that form the grand principles of the legislative measure. We have shown most clearly that there is no provision for any thing of the kind in the bill. The licentiate in medicine and surgery is admissible at 21; the Universities

will create bachelors of medicine at 22, upon which they may register as authorized practitioners, preparatory to going to a College of Surgeons or a College of Physicians, according to their bent, at the respective ages of 25 and 26. And how can uniformity of education and qualification be vindicated for a measure that leaves the profession open to every chemist and druggist's boy who has neither education or qualification?

The principles above specified—which we have shewn to be in nubibus, or in the imaginations of the authors of the Resolutions—carried fully into effect, the Physicians go on to say, would confer a great benefit on the profession and the public, &c. The profession, from the extreme north to the farthest south, from the utmost east to the remotest west of this division of the empire, have emphatically declared that they do not think it will; and how the public are to be better served than they are, when the profession shall be open for every cow-leech and farrier, every collector of simples and compounder of drugs, to practise upon their weakness and their ignorance, we own we do not understand.

The College of Physicians of Edinburgh proceed, and think "that in providing the public with a supply of fully qualified practitioners, government do all that can be attempted by legislative enactment:" government leave the ignorant public, we again say, to the mercy of chemists and druggists, who have no knowledge of physiology or pathology, or practice of medicine. The Edinburgh College know nothing of the state of ignorance in which the vulgar of this division of the empire are plunged in regard to medicine. The chemist's and druggist's shop is universally the "Doctor's shop," and nine in ten of all the labouring community do not

know that the man behind the counter who orders medicines for the ailments of themselves or their children, when he is dishonest enough to do so, which he is nineteen times in twenty, is as ignorant as they are themselves, in regard to the nature of the disease for which he is prescribing, and the fitness of the remedy which he has the boldness to administer. They have now few or no chemists and druggists in Scotland, of the class and stamp of those we have in England; the profession there is on a totally different footing from what it is in this country.

The College of Surgeons highly approve of the registration, as giving the public the advantage of knowing what practitioners are qualified. The vast mass of the public will never appeal to the registration for any information of the kind; they will still apply to the "Doctor's shop" that is nearest them—to the "healer," as they will believe him to be, who stands behind the counter, and has the gas-lit window with the red and blue bottles, without a notion of the risk they run of being helped out of their life instead of out of their disease, as they intended. If government persists in giving the disgracefully ignorant community of England, the Bill for the Better (*Qu. the worse*) Regulation of Medical Education and Practice, let it begin by teaching them letters, that they may be able to refer to the register, lest they get poisoned through inability to do so. The spiritual and immortal part has been that for the improvement of which elementary education has hitherto been most urgently pressed and willingly granted; the corporeal and mortal being about to be brought into jeopardy in addition, by the new Medical Bill, ought surely to be urged as a motive the more for educating the people.

But we have transgressed our wonted limits, to the exclusion of more valua-

ble matter; the position of the authors of the Resolutions and Report, however, made it imperative on us to go at least thus far this time, into a review of their conclusions. We presume we must have a very considerable strand of what Burns called "the stalk of earl-hemp in man" in our constitution: we are not one of those whom Cataline charged with being "*in servitutem parati*," fit for slavery; and we cannot conceive Royal Colleges of Physicians and Surgeons, and by implication and of necessity the Medical Faculties of the Universities of the land,—those aggregates surely of all that is most intellectual, most learned, most fitted to exercise self-government, one would imagine,—turned into *sub-committees*, without the power to control their own acts or to make their will prevail, supervised by others, having a supreme council set over them to review their measures, the judges of their conduct being a Secretary of State and a majority of non-professional persons, like himself utterly and necessarily ignorant of every thing appertaining to medical science and practice,—*περί πάντα την Ἐλευθερίαν*, is our motto.

We beg to call attention to the following letter, which we have just received:—

To the Editor of the Medical Gazette.

SIR,

WILL you have the kindness to inform me what is to become of myself, and other members of the College who, like myself, have been many years in practice as pure surgeons, and have no inclination to go up again for examination, although tempted by the high distinction of ranking very nearly, though not quite, equal to gentlemen twenty years younger than ourselves, for the small sum of thirty guineas? It is clear from the wording of the clauses that we can have no place in the Register under Sir James Graham's Bill. Are we, then, to put our diplomas in our pockets, and turn quacks;

or must we take to the wine and coal business?—I am, sir,

Your obedient servant,
Q.

November 5, 1844.

We should gladly give our correspondent the information he requires, but regret extremely that we cannot. We trust, however, that he, along with every other worthy member of the Royal College of Surgeons, will obtain it directly and ere long from the Council of that Corporation, and that it will be such as will prove satisfactory to all.

Our sense of justice has been appealed to by Dr. Chambers, of Colchester, in connection with the strictures we made on the discordant tenor of the observations that were made by the speakers, and the purport of the resolutions that were passed at the meeting held in that town.

Dr. C. informs us that he was overruled in the preparation of the resolutions, which were not such as he approved of, and that he and several of his friends did not speak pointedly against them, only that the harmony of the meeting might not be disturbed. We meant nothing either personal or disrespectful to Dr. C. in our remarks, and here publicly express our regret that a single word we said should have caused him annoyance. Want of space alone prevents us from publishing his letter.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN IN LONDON AND ITS VICINITY.

A HALF-YEARLY General Court of the Members of this Society was held last Wednesday evening, at the Gray's Inn Coffee House, Holborn, and was very numerous attended: Dr. Mann Burrows, V. P., in the chair.

After the Minutes of the last General Court, and of the subsequent Court of Directors, had been read, a ballot took place for the election of officers. Sir Charles Mansfield Clarke, Bart., the senior Vice-President, was unanimously elected President, in the

room of the late Sir Henry Hallford. Dr. Latham was elected Vice President, in the place of Sir Charles Clarke, and Mr. Hunter, of Mining Lane, Acting Treasurer, in the room of Mr. Bacot, who resigned. In place of the six senior Directors, who retired in rotation, the following gentlemen were chosen as Directors:—Drs. S. W. Merriman and Alex. Sutherland; Messrs. Bacot, Walne, Miles, and Headland.

Much regret was expressed at the Widows and Orphans lately relieved having received smaller annual grants than those previously on the list, but it was shewn, that after giving the subject the very fullest consideration, the Court of Directors did not feel warranted, by the state of the funds, in making larger grants at present; for, although the capital continues to increase every year, the number of applicants increases still more rapidly.

The capital, invested with the Commissioners for the Reduction of the National Debt, amounts to £42,000, and yields an income of £1550. 33 widows, and 23 children, now receive relief; the former £35 or £30, and the latter £12 or £8 per annum. It is earnestly to be desired that this Society may receive from the heads of the profession such universal support, that it may continue to confer on the widows and orphans of the less affluent, those valuable benefits, which, for fifty years, it has so efficiently afforded.

PHYSICAL SOCIETY OF GUY'S HOSPITAL.

D. G. O. REES, Esq., in the Chair.

Nov. 2nd, 1844.

THIS Society was occupied in hearing and discussing the views on the nature and seat of whooping cough, originally propounded by M. Bland, and maintained by Mr. Streeter, in the paper which appears in an earlier part of our current number. These views were opposed by Dr. Golding Bird, Dr. Gull, Dr. Munk, and Dr. Barlow, and supported by Mr. Blenkarn, and the author of the paper. In the absence of chemical demonstration, Dr. Bird held that no reliance could be placed on the fallacious test of taste brought forward to prove the existence of a saline secretion, and supported the theory of Desruelles, which views the disease as at first inflammatory, and afterwards spasmodic, by a reference to its pathology and symptoms. He contended that alkalies are serviceable, by rendering the mucus more soluble and easy of expectoration, and not by changing its irritating quality. Dr. Munk and Dr. Barlow believed the true proximate cause of the disease to be a contagious miasm; the former

considered it a true blood disease, and the paroxysm as essentially referrible to spasm. Mr. Blenkarne thought the views advanced worthy of great consideration, as they afforded something like intelligible grounds for the employment of remedies. Questions were also put by Mr. Hilton and Dr. Hughes in reference to pathological details, and the supposed gastric origin of the disease. Mr. Gaitskell strongly recommended prussic acid as a remedy. Mr. Streeter in reply conceded that in strict language miasm must be regarded as the proximate cause of the bronchial affection, but defended the accuracy of the views he had introduced to the society. He believed the evidence of taste was perfectly adequate to establish the existence of an excess of saline matter in the mucus, and that this was the true exciting cause of the paroxysms, and of that morbidly susceptible state of the membrane of the larynx, which, by reflex irritation conveyed to the nervous centres, produced the nervous lesions to which most writers had attributed the spasmodic stage. He also explained the gastric disturbance alluded to by Dr. Hughes, by the same cause, and added some pathological details. The customary thanks of the society were voted to the author, and a paper "On the Depuration of the Blood, by Dr. Barlow," announced from the chair, for that day fortnight.

title of *candidatus medicinæ*; to this examination also belongs what is called the *disputatio pro exercitio*, a Latin thesis, generally upon a chemical subject, being sustained, the candidate having his professor as respondent.

Upon these elementary medical studies, follow the practical courses, comprising ten months' attendance upon the hospital, and two months' attendance upon the lying-in institution, in which the candidate is either accommodated as a lodger within the hospital, or shews himself daily at the visit. He is in this period of his study required to look after the sick, to keep the books of the cases, to do minor surgical offices, and to watch by patients who are more seriously ill. At the end of this year he is examined as *medicinæ licentiatas*, being taken upon therapeutics, practical surgery, including midwifery and medical jurisprudence (subjects in the study of which he has lately been particularly engaged), after which he receives his license to practise. He now maintains his *disputatio doctoris*, and is advanced to the degree of doctor in medicine without further examination.

The school at Stockholm does not grant degrees in medicine, having no authority so to do. The creation of doctors in medicine always takes place in batches of twenty or thirty, and is made the occasion of a great festival.

To acquire a title to higher offices, to be employed by the state in any public situation, the doctor or physician must further be a *magister chirurgiæ*, to obtain which rank he must undergo a special examination before the professors of the Stockholm school of medicine, the *Institutum Carolinum seu Medico-Chirurgicum* of Charles XIII., instituted in the year 1810, and originally destined as a school for army surgeons during the war; but the necessity for it in this direction having ceased, it has been advantageously continued in the manner just stated. According to the catalogue of lectures for the year 1840-41, this school reckons eight professors, and several associates; the professors reading courses of lectures from the beginning of October to the end of May, upon operative surgery, surgical instruments, and bandages (Eckströmer); practical medicine; midwifery and the diseases of pregnancy, of nursing women and of infants at the breast; on surgical pathology, therapeutics, and practice (clinical surgery); on zoology; human anatomy (Professor Retzius), comprising instructions in medico-legal examinations and inquiries; on medical botany, medical zoology, and materia medica; on animal chemistry, inorganic chemistry, and chemistry; a special clinical course on the diagnosis and treatment of the diseases of the chest,

COURSE OF MEDICAL STUDY IN SWEDEN.

Young men who intend to devote themselves to the profession of medicine, after their preliminary general and classical education is completed, are required to proceed to one of the Swedish universities, Upsal or Lund, where they are not allowed to matriculate until they have gone through a preliminary or *student's examination* before a special committee. They then enter upon a course of philosophical study, and undergo another examination, usually after the lapse of from two to three years, the *medico-philosophical examination*, which embraces the Latin and Greek languages, mathematics, history, logic, ethics, legal philosophy, political economy, natural philosophy, chemistry, and botany. It is only now, and after having acquired the title of *candidatus medico-philosophicus*, that the student begins his medical studies, properly so called, and which he may pursue either at Upsal or Lund, or at the medical school of Stockholm. The medical studies consist in anatomy, physiology, medical botany, zoology, materia medica and pharmacy, pathology, and the principles of surgery; upon which subjects, after the lapse of two years more, another examination is instituted, which, successfully stood, the student acquires the

with particular reference to the methods of investigation by auscultation and percussion. The students meantime have daily access to the Royal Hospital, called the Seraphim Lazaretto, the Royal Garrison Hospital, the General Lying-in Hospital, and the Foundling Hospital; but in each instance only during the visit of the medical officers or of the apothecary. They have, further, access to the museum daily, and twice a week to the library for the purpose of obtaining books. It is very important to observe, that the pupils of the Charles's Institute are also admitted to the great Military Hospital, where there are beds for a thousand patients; an arrangement which harmonises with the practice of selecting military medical officers from among the civil medical practitioners, the selection taking place after examination, and the number of applicants always securing as many as are required of the best informed.—*DR. KRIEGER, Medicinische Zeitung, No. 11, 1844.*

DEATH FROM INTERNAL HEMORRHAGE AFTER A VIOLENT EFFORT.

A. A., 26 years of age, of great muscular strength, laid a wager that he would perform a certain piece of work with the shovel or dung-fork, in the farm-yard, in the course of two hours. He had almost completed the work, and won the wager, when he began to complain of pains in the bowels. He drank several glasses of brandy, and went on with his labour; but the pain in the abdomen increased, he was seized with a violent shivering fit, and had to be carried to bed, where he fainted. The patient was ordered a dose of castor oil, and an oily emulsion. In the evening the patient still complained of a feeling of chilliness, of pains in the belly, and a disposition to vomit. The belly was very much distended, and painful on pressure; the pulse was extremely small and contracted; the countenance was sunken, with the expression of deep suffering. The patient was bled, but syncope supervening, the vein had to be stopped. Twelve leeches were ordered to the belly, and repeated clysters prescribed, the patient not having yet had any opening from the bowels. These means having remained without effect, the patient was put next morning into a warm bath, and felt himself relieved, but the distension of the belly went on increasing. The patient now became excessively anxious; he had long fits of shivering, cold extremities, clammy sweats, hicough, and facies Hippocratica. In the afternoon, having requested to have another warm bath, he was put into it, but within five minutes he was taken out dead.

The body was extremely pale; the abdomen distended to the bursting. As soon as the abdominal parietes were cut through, an interminable stream, as it appeared, of fluid blood flowed from the opening, so that the room immediately became inundated with it. All the blood having at length drained off, the viscera, liver, spleen, bowels, &c. presented themselves without a trace of inflammation. After a long search, I at length discovered a rent, several lines in length, in the splenic vein, from which the fatal hæmorrhage into the abdomen had taken place.—*DR. MILING, Medicinische Zeitung, No. 8, 1844.*

LEAD COLIC.

DR. HOFFMANN, of New Ruppın, states that the combination of alum and opium cannot be sufficiently prized in lead colic. Inflammatory symptoms removed, it soothes the pain, keeps the bowels regular, and tranquillizes the patient.—*Ibid.*

URINARY CALCULI OF REPTILES—FOSSIL UROLITES.

M. DUVERNOY lately laid before the Royal Academy of Sciences an account of the urinary calculi which *M. Lesueur* had discovered in two specimens of the tortoise—*Trionix spiniferus*, and which consisted of a mixture of phosphate of lime, carbonate of lime, and organic matters. One of the calculi was of large size, and weighed upwards of 260 grains, and was composed principally of phosphate and carbonate of lime, grains of sand, and organic matter. One of the calculi appeared to have been formed upon a fragment of a shell as a nucleus; and the other and larger one, as has just been seen from the statement of its composition, contained a mixture of grains of quartz. The water in which this *Trionix* lives must therefore find access to the cloaca or urinary bladder of the animal. *M. Duvernoy* further shewed, that many of the bodies called coprolites were in fact the solidified urine of reptiles, and that they had been confounded with the masses of intestinal excrementitious matter which constitute true Bucklandian coprolites. The urine in the Saurii, in the Ophidians, and the Crocodiles, at the moment of its excretion appears to consist of a soft and ductile paste, which is moulded into a particular shape as it passes the cloaca; exposed to the air it soon acquires a stony hardness, which enables it to resist change. A number of these *urolites*, mixed among proper coprolites, discovered by *M. Robert*, are found in fact to contain phosphate and urate of lime, and to have a general composition very analogous to the solid urine of the lizards and serpents of the

present day. This circumstance, coupled with their form, enables M. Duvernoy to say, that those fossil uroliths which have not a spiral form have proceeded from crocodiles, whilst those having a decidedly spiral form have been passed either by lizards—Saurians, properly so called—or by serpents—Ophidians.—*Comptes Rendus*, vol. xix. No. 5.

CURIOUS CASE OF PARALYSIS.

A MAN, 70 years of age, gouty and lame through gout of the left foot, after drinking a few glasses of beer, was struck apoplectic, with hemiplegia of the left side, showing signs of congestion to the head, and vomiting a clear watery fluid. The left or paralysed arm was completely abstracted from the influence of the patient's will, save that he had the power left of grasping my hand strongly when I put it within his hand; he could not, however, give me his hand when desired to do so, or in any way to guide it as he wished; the hand seemed to be jerked involuntarily towards the man's face, so that he struck himself continually when he attempted to move the arm. The patient, by blood-letting from the opposite arm, leeches to the head, blisters to the spine, &c. recovered in great measure; though from his great age it is doubtful whether or not he will recover completely.

This case is interesting, inasmuch as neither sensation nor motion is completely destroyed. The patient has feeling in the arm when it is touched, and can grasp a hand forcibly; he can also move the arm, and that actively, but he cannot control its movements; and curiously enough, the involuntary tendency is towards his own face. I do not remember to have met with a case precisely of the same kind in the course of my reading; nor do I feel myself competent satisfactorily to explain the phenomena.—*Dr. Lion, in Casper's Wochenschrift*, No. 33.

CASE OF CONGENITAL DEFICIENCY OF THE STERNUM.

A MAN, strong and well-built, 5 ft. 3 in. German (about 5 ft. 4 in. English) in height, and 22 years of age, was found, on examination for military service, with a remarkable deficiency of the sternum. In the middle of the chest the motions of the heart could be perceived at a considerable distance. The sternum was entirely wanting, with the exception of a small rudiment in the situation of the ensiform cartilage, so that the heart was only covered in the middle line of the thorax by the common integuments. On applying the hand, the alternate contractions of the auricles and ventricles could be distinctly perceived. The extre-

mities of the ribs on either side, where they ought to have been in contact with the sternum, were found connected in a continuous, apparently cartilaginous line. The young man declared that he had always enjoyed good health, and that he had never suffered from the deficiency pointed out in his business of musician.—*Medicinische Zeitung*, No. 10, 1844.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

Gentlemen admitted Members on Friday, Nov. 1.—R. F. Freeborn.—F. J. Brown.—J. Millard.—H. H. Snell.—S. M. Macswiney.—G. Ashdown.—B. L. Jemmett.—F. Brittan.—G. Keane.—R. Fletcher.

APOTHECARIES' HALL.

Gentlemen who have obtained Certificates, Oct. 31.—F. J. Brown, Standgate Creek, Rochester.—W. Finer, 6, North Place, Kingsland Road.—J. Williamson, Longloathley, Penrith, Cumberland.—R. Ellis, Brompton.—J. H. Gale.—W. Stevens.—C. L. Wall, Worcester.—G. Rodwell, Choseley Dorking, Norfolk.

NEW CONTINENTAL WORKS.

Adelmann, G. F. B., Untersuchungen über Krankhafte Zustände der Oberkieferhöhle. 4to. sewed. Dorpat.—(On Diseases of the Antrum.)

Archiv für physiologische und pathologische Chemie und Mikroskopie in ihrer Anwendung auf practische Medicin, hrsgb. von F. H. Heller. 1st Band in 3 Hefen. 8vo. sewed. Berlin.—(A continuation of the Work begun by Simon.)

Hallmann, E., über eine zweckmässige Behandlung des Typhus. 8vo. sewed. Berlin.—(On the Treatment of Typhus.)

Kraus, L. A., Kritisch, etymol. medicinisches Lexicon, 3te Aufl. 8vo. sewed. Göttingen.

Nieberding, Th., das Asthma thymicum oder Spasma glottidis. 8vo. sd. Halle.

Onsenoort, A. G. v., Handbuch der Krankheiten und Gebrechen des Auges, aus dem Holl. von F. Neuhausen. 1r. Bd. 1te. Liefg. 8vo. sd. Ceefeld.—(On Diseases of the Eyes.)

Sonnenkalb, H., die medicin. Fakultät zu Paris. Ein Sendschreiben an die medicinische Fakultät zu Leipzig. 8vo. sewed. Leipzig.—(On the Constitution of the Parisian Medical Faculty.)

Seuche unter d. 2. Russ. Armee wahr. d. letzten Türkischen Kriege, aus d. Russ. v. W. Thalberg. 8vo. sd. Dorpat.—(On the Climate of Moldavia and Wallachia, and the Epidemic Diseases which appeared in the Russian Army during the late Turkish War.)

WILSON & OGILVY, 57, Skinner Street, London.

THE LONDON MEDICAL GAZETTE,

BEING A
WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

FRIDAY, NOVEMBER 15, 1844.

INFLUENCE OF BURIAL CLUBS ON THE MORTALITY.

IN our number for August 23d, we published a short article "On the Influence of Burying Clubs in augmenting the Mortality." There we certainly dipped our pen into very deep-coloured ink, and having sketched a perfect murder of the innocents, our statement was treated as exaggerated, and but little heeded. There were some, nevertheless, who knew that the picture was not altogether overcharged. The excellent letter of Mr. Leigh, published in our number for Sept. 6th, came in confirmation of our "New View of English Society," and we now add an extract from the evidence of the Rev. Mr. Clay, forming part of the "Appendix to the First Report of the Commissioners of Inquiry into the Sanitary State of large Towns and Populous Districts," which we trust will satisfy all of the extent to which the practice we denounced was carried, and also incline men more to listen to the suggestion of the enlightened Secretary of the Poor Law Commission, on the necessity of having a properly qualified and responsible medical man appointed in each district or division of the country, to act as an Officer of Health, and to verify by inquiries at the time and on the spot the fact, and, as far as it might be ascertained, the cause of death; not to say any thing at present of the imperative necessity of the legislature interfering to make the practice of committing murder more difficult, by securing the ignorant public against the malpractice of ignorant chemists and druggists, who are the parties under cover of whom the present system of child-murder is especially carried on, when any show or pretence is made of having medical (!) assistance in the case.

Mr. Chadwick, in his supplement to the sanitary report, adverted to the cases of

murder discovered after interment, which a proper examination before inhumation might have prevented or detected. He also developed the existence of a practice of infanticide for the sake of "burial money" obtained from several clubs, in which the lives of the children were insured. Now, although the existence of the practice was proved by trials of cases in courts of law, the crime was by many deemed so monstrous, that its existence as a *practice* was believed to be impossible. It was, in particular, denied that any such practice had taken root in the town of Preston, which was distinguished by the number of its burial societies, although it was known that the payment of multiplied sums of burial money were insured from several clubs, on the death of the same child. The horrible reality has, however, been developed there also by a more recent investigation, by the Rev. Mr. Clay, a clergyman of that town, from whose interesting report on its sanitary condition the following evidence is extracted:—

Under the head of *Negligent treatment of children*, Mr. Clay says:—It is known that druggists are often resorted to for medicine and advice by the poor, and probably in some or many cases assistance from such quarters may have been obtained for sick children; but after making all allowances, it is to be feared that among certain classes of the poor a great amount of infant death takes place without any thing worthy the name of medical assistance having been obtained or even sought.

If the druggist is sometimes applied to for the medicine which, with greater propriety and safety would be prescribed by the medical man, he is too often asked for compounds which no medical man would prescribe; such as "Godfrey's Cordial," "Infants' Preservative," "Soothing Syrup," "Mothers' Blessing," &c. Returns have been obtained from all, or almost all, the chemists and druggists in Preston, of the quantity of these mixtures sold by each; and it is due to those

gentlemen to say, that the information requested from them was furnished in the most prompt and obliging manner. It does not appear that any one particular druggist sells the extraordinary quantity of Godfrey's Cordial, &c. which has been heard of in other towns, but that all vend the nostrums in question to a greater or less extent; and the aggregate of the whole quantity sold indicates that, allowing half an ounce per week to each family, upwards of 1600 families are in the habit of using Godfrey's Cordial, or some other equally injurious compound. It is not the least melancholy feature in the general aspect of these facts, that "Godfrey" (as it is familiarly called by its purchasers) is not given in ignorance of its noxious properties, a circumstance which the Charitable Society's agent had frequent occasion to notice. It is administered not so often, probably, by the mother, as by the nurse. The former, while working in the factory, intrusts her infant to an old woman or young girl, who may also have the charge of other infants; and this general nurse, in order to fulfil her task with as much ease to herself as possible, drugs the unfortunate babes with "Quietness." Mr. Robert Brown, surgeon, who collected much important information on this subject, had, among other communications made to him in writing, the following, which, although it may not at first appear very important, gives clear intimation of—the obtaining medicine and advice from druggists,—of mothers leaving their children in the care of most improper nurses,—and of the general suspicion of the use of deleterious drugs:—

"A child was brought to me for a little aperient medicine. The mother suspected that the person who nursed it had been in the habit of giving it some narcotic; it had not had more than two or three motions for the space of three weeks. I advised the mother to stay at home and attend to it herself. The advice was followed, and the child recovered in a few days."

Another highly respectable chemist and druggist writes,—

"A woman brought a bottle to me containing some medicine for examination, which was found to be an infusion of opium. She said a neighbour had given some of it to one of her children, upon the recommendation of some quack, who was in the habit of calling upon poor families for the purpose of selling the medicine. Her child became stupified in half an hour, and ultimately died. The man denied that the death was the effect of the medicine, as he had a very extensive sale, and could bring many proofs of the good resulting from its use."

Sick clubs.—Great pains have been taken by Mr. Holden to collect information relating to the management and statistics of the sick clubs in Preston. There is much reserve, however, in giving such information, and consequently less has been acquired than would have been desirable for the purpose of forming any general conclusions as to their operations and value. The following summary, circumscribed as it is, is sufficient to manifest the widely different amounts of sickness, and rates of payment, existing in only eleven clubs. The table relates to the year ending July 1, 1843.

BOROUGH OF PRESTON.

Report on its Sanatory Condition, by the Rev. J. Clay.

	Total Members.	Sick during Year.		Average Period of Sickness in Weeks.	Average Payment to each Sick Person.		
		Members.	Per Centage.		£.	s.	d.
Tee-Total	37	2	5.4	3.	1	10	0
Managers	47	5	10.6	8.2	4	2	0
Worthy	80	12	15.	7.5	3	7	8
Rehabites	116	19	16.3	3.7	1	17	7
Odd Fellows	689	124	18.	4.	2	0	0
Female Rehabites	30	6	20.	3.3	1	0	0
Forresters	230	52	22.6	8.8	2	11	0
Ebenezer	111	28	25.2	...	3	7	6
Catholic Beneficent	167	51	30.6	10.	2	19	3
Ditto, female.	80	25	31.2	9.	1	13	10
Perseverance	58	20	34.4	6.1	2	7	11
	1645	344	20.9				

There is one circumstance apparent in the above table, which adds further proof of the value of temperate habits among the poor.

The Tee-total Society (of which, however, the numbers are rather small for the purpose of any general deduction) presents not

merely the smallest proportion of sick, but a proportion amounting to little more than one-half of that next most favourable, while at the same time its members suffer the shortest average duration of illness. The extremes in the amount of sickness, as shewn by the proportion of sick members pressing in their respective societies, are very striking, being only 5·4 per cent. in the Tee-total Society, and 34·4 per cent. in the Perseverance. The Rechabites, who might be expected to occupy a creditable place nearer the Tee-totalers, are not in all cases, as appears from the returns, worthy of the name they assume.

Most of the sick clubs are also burial clubs; that is, a certain sum, varying from £2. to £10., is allowed on the death of a member. There are also in Preston seven societies acting only as burial clubs, but acting as such very extensively. Papers sent in from the secretaries to three of these clubs accompany this report*. From them

* The collector to a burial club, containing upwards of 5000 members,—a man whose intelligence is greatly superior to his rank in life, states, that while he believes such societies to be productive of much general benefit, he knows several instances in which they have been much abused. He is acquainted with cases in which *hired nurses* have speculated on the lives of infants committed to their care, by entering them into the clubs. Within the last few days, two young women proposed to him to enter a child into the society in which he holds office, offering to pay the weekly premium alternately. Upon inquiry, in conformity with his usual custom, as to the relation subsisting between them and the child, he learned that the child's mother was dead; and that *the infant itself was placed at nurse with the mother of one of these young women*. He also detailed the particulars of the case of an illegitimate child, which, having been in the care of its maternal grandmother, was removed, on her death, to the house of its father's relatives. Within a week of that removal, the child died (although, previously, it appeared to be in strong health); and under such circumstances as induced him, not only to refuse payment of the burial money from his club, but also to make such a representation of the affair to the officers of another club in which the child had been insured, as led them to make a similar refusal. No attempt was made to compel payment from either society.

The same "collector" has kindly furnished an account of the ages at death, of 400 members of the society to which he belongs, being the number removed by death during the last three years and three months.

Under 12 months old	69	17·22	} 62
From 1 year to 2 years old	79	19·77	
2 years to 3 " "	52	13·	
3 " " "	28	5·	} 38
4 " " "	20	5·	
5 " 10 " "	36	9·	
10 " 20 " "	23	5·77	
20 " 30 " "	17	4·22	
30 " 40 " "	23	5·77	
40 " 50 " "	25	6·22	
50 " 60 " "	14	3·5	
60 " 70 " "	10	2·5	
70 " 80 " "	4	1·	

In consequence of a suggestion made to him, the same person states it to be his opinion, that much advantage would be found by the adoption of a plan tending to increase the solicitude for the preservation of infant life; by which plan, a small

it appears that the present members belonging to the three societies are upwards of 23,400! and that the aggregate sum expended by them in funerals, or rather paid to claimants, amounts to £2460 yearly. In only one return are any particulars given as to the age or death of parties entered as members; and from that it appears that 64 per cent. of those members die under five years old. The returns do not afford the means of comparing this high per centage with that of the operative class generally. There are other circumstances connected with the operation of these clubs suggesting matter for grave consideration and inquiry. The same person may be entered into every society. The respectable secretary to one of the societies states, that he knows several instances in which the same person is on the books of three clubs. Thus, on the death of a child, the parent or other insurer may receive £16. 6s. 6d. (according to the payments of the three clubs now referred to), while the expense of interment with all befitting propriety should not exceed, and in fact seldom amounts to, £3. There is no restriction in any of the societies as to the admission of illegitimate children. If the weekly penny or halfpenny is paid for the stipulated period by either mother or father, he or she is entitled, on the demise of the insured, to all the benefits which the society promises. The burial clubs enrol 12 or 15 times as many members as the sick clubs, inducing the inference that the prospect to a poor person of support and assistance in illness is less desirable than the possession of £5., £10., or £15., on the decease of his child. Such a sum, too, being a larger one than the insurer, in most cases, ever before possessed at one time, or ever could hope to possess, except from such a contingency as that adverted to. Burial societies are, no doubt, susceptible of highly beneficial operation, especially as insuring the lives of fathers of families; and it is right to speak with reserve of their tendencies, in the absence of all positive proof of their injurious effects; but the facts above

weekly payment, commencing at, or soon after birth, and continued for 10, 12, 13, or more years, should ensure a liberal allowance for 1, 2, or 3 years, at a time when education would be most valuable to the child, and the necessity for sending it to the factory would, in a great measure, be obviated.

It is also admitted by the same authority, that a great improvement would be effected, if, instead of money being paid by the club at the death of a member, the funeral were undertaken by the society, and performed in a solemn and appropriate manner; but, nevertheless, to effect this, it would be necessary that *all* the burial societies should adopt the plan. Were only one or two to act upon it, insurances would soon be withdrawn from them, and transferred to those societies in which the old system of money payments was continued.

mentioned will be, to some minds, suggestive of painful ideas. When an insured child is attacked by sickness, the feelings created by the anticipated payment from the burial club, should it die, may sometimes be stronger than the anxieties for the preservation of its life. A respectable collector of cottage rents states in writing,—

“That he often fails to obtain the rent from cottagers, in consequence of sickness. The sickness of children is most commonly assigned as a reason for the non-payment. Almost all the children in families where he collects are members of burial societies, most commonly are subscribers of 1d. a-week each child. The children of the poor are, when sick, greatly neglected, and lost from want of due attention to cleanliness; and the poor seldom seek medical assistance for sick children except when on the point of death. One poor child, living in — street, the son of Thomas —, sits in a chair, or lies in a corner of a room, upon some bags of rags, without any covering upon him, and entirely neglected, both as

regards nursing and medical relief. Such cases he is constantly witnessing.”

Another collector of cottage rents states,—

“The poor people have often told me that they were unable to pay at that time; but when a certain member of the family,—generally a child,—died, they would be able to pay. I have felt much shocked at this, and I have told the people that it was very wrong to depend upon anything of the kind. Most of the children at the houses which I visit are in burial clubs.”

A lady, a friend of the author of this Report, states, that a young woman, whose services she required as a wet nurse, having a child ill, she offered to send her own medical friend to attend it. The reply of the nurse was,—“Oh! never mind, ma'am, it's in two burial clubs.”

Burial clubs.—Returns have been furnished by the respectable and intelligent officers of the “Preston Original Legal Friendly Burial Society, established 31st December, 1831.” From these returns the following table is formed.

Children between Two Months and Five Years Old.

Entered.		Actual Number on the Books.	Average Number on the Books during the Year.	Died.				Per Cent. on all the Deaths.
Years ending December 31st.	Number of Children.			Payable.	Per Cent.	Not Payable*.	Per Cent.	
1810	..	2,413	...	...	...	...	...	...
1811	1,515	2,812	2,627	167	6.35	10	1.52	7.87
1812	1,167	3,292	3,067	202	6.58	51	1.76	8.34
1813	1,549	4,110	3,716	253	6.81	32	0.86	7.67
		...	9,110	622	...	126	...	...
Average of three years . . . .		...	3,137	207	6.6	12	1.4	8.0

The following table shows the progressive increase of members since Dec. 31, 1840 :—

Years ending December 31st.	Under Five Years.		Above Five Years.		Total Members.
	Members.	Increase.	Members.	Increase or Decrease.	
1810	2,413	...	11,189	...	13,902
1811	2,842	429	12,675	+ 1,186	15,517
1812	3,292	450	12,703	+ 33	16,000
1813	4,110	818	12,560	— 143	16,700

The rules of the society prohibit entrance before the completion of eight weeks of age, and also after 55 years. They also exclude all persons who may “have any disorder or complaint upon them;” . . . “and in no case shall any member receive any benefit from this society unless 16 clear payments

(weekly) to the fund have been made previous to the day of their death.”

In the last printed report of the society it is stated that, at the close of 1843, the number of members was 16,700, and the funerals, during the year, 469. Calculating upon the mean of the number of members

* Having died within sixteen weeks of entrance.

between December 1842, and December 1843 (16,350), this mortality is about 2·9 per cent. The table has shown the mortality of infants in the society, for 1843, to be 6·8 per cent., and it remains to be stated, that the mortality among the members above five years (the mean of that portion of the society being 12,634, and the deaths being 216), is 1·7 per cent.; and that the general mortality of the society for 1843 (469 deaths "payable" + 32 "not payable" = 501) is 3 per cent.

The mortality of Preston has been already stated at 2·97 per cent. But this mortality includes a class of infants inadmissible to the burial societies, viz., those under nine weeks old, and also of adults beyond 67 years (55 years, limit of admission + 12 years, age of the club). In order, therefore, to compare the mortality of the society with that of the town, we must deduct from the latter the deaths under nine weeks and above 67 years: thus,

Total Annual Deaths.	Under 9 Weeks.	Above 67 Years.
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1488 — (170 + 125) = 1193 deaths,
= 2·1 per cent. on a population of 50,000.

In this view the mortality of the burial society exceeds that of the general population by 0·6 per cent.; or, for 4 deaths in the town, there are 5 in the society.

In pursuing the comparison now attempted many other considerations must be taken into account. On the one hand sick and weakly persons are not admitted into the society, and the members who are above 5 years of age must consist chiefly of persons from 6 to 19 years old; on the other hand the general mortality of the society will be much affected by the large proportion of infant members = one-fourth of the whole.

Assuming, as we may, that the deaths in the society "not payable" appertain almost solely to children dying before "16 clear payments have been made for them,"—i. e. to children between two and six months old, a comparison, as regards this class of children, between the town and the society may be thus given:—

Annual average of deaths in the town (excluding those under 2 months and above 67 years) 1193:—deaths between 2 and 6 months, 125 = 10·4 per cent. on all the deaths.

Deaths in the club for 1843, 501; deaths between 2 and 6 months, 32 = 6·4 per cent.

A difference of this kind, though not perhaps to this extent, might be expected. The children entered into the society are, in a great measure, select lives; and, during the 16 weeks, they are sure to receive as much attention as can be bestowed upon them; while on the contrary, the uninsured

children will include all the weakly and precarious lives rejected by the societies.

The total of infant deaths in the society is, according to the table, 8 per cent. on all the children entered.

The deaths, in the general population, of the same class of children (between two months and five years) have been, on the average of the last six years, 629 annually. The census of 1841 stated the children under five to be 6885; and if we take from that number 300 as the proportion under two months old,—a deduction greater, probably, than the facts would require, we have a mortality (629 deaths in 6585 children) of 9·6 per cent. Having seen that infants dying in the town between two and six months are 10·4 per cent. in all the infant deaths, while the same deaths in the society are only 6·4 per cent., we should be led to expect that a similar proportion would appear when infant deaths from two months to five years in the town are compared with those of the society; the non-insured comprising the poorest and sickliest, and the insured being more choice lives, and that the facts would probably be represented thus:—

Mortality between 2 and 6 Months, calculated on Infant Deaths.		Mortality between 2 Months and 5 Years, calculated on Infant Population.	
Town.	Society.	Town.	Society.
As 10·4 :	6·4 :	9·6 :	5·9 :

But the mortality of the society instead of appearing as above, 5·9 per cent., is 8 per cent.!

The members of this burial society forming so large a portion of the whole population, it may be desirable to separate them from the general mass, and compare the mortality of the two parts respectively for the year 1843, estimating the population at 52,500, and taking the mortality from the table No. 4:—

Members of burial society	Deaths.
16,350	501 = 3 per cent.
Remaining population	36,150
	996 = 2·75 "

52,500 1,497

Let it be borne in mind, that, although the society has a very large proportion of infant members to account for its excessive mortality, the remaining population comprises all infants under two months, all the sick and ailing inadmissible to the society, and all those whose age exceeds between 60 and 70 years.

In 1841, the children in Preston under five amounted to 6885; they may now be calculated at 7200. If from this latter number are deducted those under two months old (300), the children unlikely, from their station, to be entered into any club (800),

and also sickly children, together with the offspring of the very lowest class (500), there remain 5600 children eligible to burial clubs, of whom two-thirds are entered in this club alone.

In glancing at the second table now given, it will be observed that the society in question has, latterly, derived its increase from children alone. The adults have already been entered; and henceforward children only will constitute the new members.

[We leave our considerate readers to draw their own inferences from these statements of facts. That infant life is most sinfully and cruelly sacrificed there cannot be a doubt. As dog-carts and chimney-sweeps, and blacklegs, have been held subjects worthy of special legislative interference, let us trust that another session of Parliament will not be suffered to pass by without a bill to regulate Burial Societies, and to protect the helpless infants of our manufacturing population against murder.—*ED. GAZ.*]

ON DISEASES
OF THE
LUNGS FROM MECHANICAL
CAUSES,
AND DR. CALVERT HOLLAND'S ACCOUNT
OF THEM.

By H. M. HUGHES, M.D.
Assistant Physician to Guy's Hospital.
(*For the Medical Gazette.*)

ALL who have paid much attention to the diseases of the lungs could not fail to be interested in the work of a physician directed to the investigation of the complaints induced by particles floating in the air, particularly when that physician had been so favourably situated for such inquiry, as, from his former works, Dr. C. Holland was known to have been. It was with much interest, therefore, that the papers of Dr. Holland, with the title above mentioned, were perused by me as they appeared in the *Edinburgh Monthly Journal*, and it was with equal, perhaps even greater interest, that they were examined since they have been printed in a collected form. The reader cannot, I think, fail to be pleased, and indeed, surprised, at the amount of time and labour which the author has evidently devoted to the subject generally; and more particularly at the large collection of statistical facts which he has presented to the world. It must, however, be acknowledged, that on both

occasions I have myself been disappointed to find that the author appears to entertain, or at any rate has expressed, no very clear views of the pathology of the affections to which the grinders are especially obnoxious. This deficiency, or want of completeness, in Dr. Holland's work, has doubtless arisen from the particular prejudice entertained by the grinders against inspection after death, and the consequent comparatively rare opportunities he has enjoyed of becoming familiarly acquainted with the morbid anatomy of their diseases. If it were otherwise, I feel assured from the great pains he has evidently taken in elucidating the subject, that Dr. Holland would have contributed more definite and decisive information respecting the appearances presented after death by the diseases on which he has written. It is generally known, and Dr. C. Holland must himself be perfectly aware, that the "pointers' asthma," or "grinders' rot," has been long, and very generally, considered to depend upon the disease now called chronic bronchitis, combined with dilatation of the bronchial tubes and emphysema of the lung, or dilatation of the pulmonary tissue. For though it may be true, as Dr. Holland has stated, that no author has particularly referred to the latter disease, in consequence of the imperfect acquaintance with morbid anatomy possessed by the individual, or existing at the time in which he wrote, it is now known to be almost necessarily induced by long continued and severe bronchitis or bronchial irritation. In the correctness of this opinion of the pathology of the complaint my own observation has led me entirely to coincide, though I am aware some physicians have expressed a different opinion, and believe that the diseases called the "grinders' rot" and "tubercular phthisis" are essentially identical. It is this question which I had hoped to have seen decided by the observation and necroscopic researches of Dr. Holland. It is this question, really very important in a hygienic point of view, upon which information is yet needed. It is the morbid anatomy of the diseases of the lungs or bronchial tubes, occurring among the grinders, that requires elucidation. It is this inquiry which I conceive may throw some additional light upon the still

obscure question of the pathology of tubercular deposition. But, unfortunately, it is this very question upon which the views of Dr. Holland appear to be indefinite, and his statements incomplete. His facts, indeed, appear to point in one direction, and his opinions in another. Should two persons or parties be engaged in public discussion upon the pathology of tubercles and of phthisis, and should they differ as to the cause of the deposition of these bodies, or the formation of this disease, each party might, as it appears to me, quote Dr. Holland in support of his particular views. The one might rest upon his obscurely expressed opinions, while the other might fairly advance his facts in support of an entirely different or even opposite line of argument. I am desirous not in any way to misrepresent the author, and shall therefore quote his own words in support of my assertion; I am, at the same time, particularly desirous that he should not regard his present commentator in the light of an unfriendly critic, but that, on the contrary, he should view him as one who highly estimates what he has already done, and who hopes hereby to invite him to extend his inquiries so as to render his own conclusions more definite, and to fix, upon the secure foundation of a large collection of facts, the morbid anatomy of the diseases of the lungs induced by mechanical causes.

The establishment of the true pathology of the complaint to which grinders are especially prone appears still to be a desideratum. The author states, indeed, that it presents two very distinct varieties; though he appears to regard both as only different forms of one and the same disease. Thus (p. 24), he says, "In some we have the leading symptoms of ordinary tubercular consumption; in others, extensive pulmonary degeneration, associated with striking modifications of the symptoms. In the one class, which will contain a majority of the sufferers, a distressing or urgent *cough* has generally existed for years; in the other the cough has been of much shorter duration, and slighter in degree, and has seldom excited the attention of the artisan until the breathing has become short and difficult.

"In the one class, the cough long precedes the disordered respiration; in the other it cannot justly be said to

follow; both are almost co-existent from the first. We will briefly sketch the difference observed in the two classes in the advanced stage of the disease. In the one, in which the cough is the early and prominent symptom, there is less emaciation of the body, a less tendency either to diarrhœa or to hectic, and the breathing is much more oppressed than in the other, and the expectoration is often exceedingly copious. The chest also exhibits considerable anterior rotundity, and even when there is unequivocal evidence of a structural change in the pulmonary tissue, the sound emitted on percussion is particularly sonorous. There is much greater suffering, and greater anxiety, depicted in the countenance in conjunction with these symptoms, than in those incorporated in the other class. And further, the tongue, and the mucous membrane, show, in most instances, a very slight departure from the condition of health. Diarrhœa is seldom present, except when chronic inflammatory mischief has long existed in some of the important abdominal viscera." In page 27 he says, of the same form of complaint, "We have no hesitation in stating that the sound (on percussing the chest) is frequently much louder than in health. In all the individuals in whom we have found this particularly marked, shortness of breathing, and a distressing cough, have always been present. The cough has generally existed for years. On this subject we speak from extensive investigations. On applying the ear, or stethoscope, to the chest, the respiration is exceedingly loud and bronchial in its character. The ordinary sounds of inspiration and expiration are sometimes not heard, or very indistinctly, and this peculiarity of the respiration is often detected, in various degrees, throughout both lungs, and when once heard the peculiarity of it cannot be mistaken. Accompanying this symptom is the prominence of the chest, a condition which is very obvious, when compared with the development of the thorax in cases where the pulmonary degeneration is not associated with this kind of respiration. Among the grinders suffering from the occupation, the aged—that is, persons from forty to fifty-five years old,—generally present this symptom if they have been long subject to violent cough." "In

the other class (he says, page 25,) in which the cough is scarcely recognised by the artisan previously to the breathing becoming short, the body rapidly emaciates, the expectoration is less copious, the chest is somewhat contracted and flat, and on percussion emits a duller sound, though often to a considerable extent sonorous, than when the cough has long preceded the dyspnoea. In both classes tubercles are found in the lungs, though by no means invariably in cases in which the cough was the principal distressing symptom for years."

Now, it must be obvious to all who are conversant with the symptoms and physical signs of diseases of the lungs on a large scale, and who are also in the habit of examining a large number of bodies after death, that Dr. Holland's former class of cases, which, he says, "will contain the majority," are in fact examples of chronic bronchitis, dilated tubes, and emphysema of the lungs: the very disease which has hitherto been generally supposed to constitute the "grinders' rot;" but of which there has not hitherto appeared any evidence so decisive as that afforded by Dr. Holland. This evidence is certainly not the less important and conclusive because it appears to have been accidental and unintentional. I say unintentional, because Dr. Holland seems to consider both classes of cases as merely different forms of phthisis, and quotes Dr. Hastings' work on bronchitis, to show that they vary from the chronic form of that complaint. The view herein entertained of the nature of the first class of cases is confirmed by the author having observed after death "enlargement of the bronchial tubes and an expansion of the pulmonary tissue as among the most important structural changes."—(Page 12). It is true, as I have previously quoted, he says, "in both classes tubercles are found in the lungs," but he adds, "though by no means invariably in cases," &c. &c.; and in a former part of his work (p. 12), he states, "This form of complaint is no *certain* protection against the inroads of further pulmonary degeneration, as tubercles, hepatisation, or other structural changes." That he believes the grinders are especially liable to phthisis seems evident from the following sentence (page 14), "Whatever may be the

cause of tubercles, they are found in numerous cases in the lungs of grinders, and can be traced to the inhalation of dust."

Yet at other parts of his work, he appears clearly to consider the characteristic peculiarities in the diseased lungs of grinders to consist in dilatation of the tubes and emphysema of the pulmonary tissue. It is to be lamented that the work is not better arranged, that it contains so many repetitions, and that the pathological views of the author are so uncertainly, variably, and indefinitely expressed. He is clearly in error when he states (p. 45), referring to the first class of cases, "The association of these symptoms can be common occurrences only where the healthy and robust constitution is exposed to the inhalation of gritty particles." He appears, indeed, himself afterwards to allow that they may arise independently of such causes, as he says, when speaking of saw grinders (p. 95), "In this branch there are only four affected with the disease peculiar to grinders, and these cases are more likely to have arisen from exposure to wet and cold than from the inhalation of dust." I can myself assure the author, from oft repeated experience, as not a week, or scarcely a day, passes but such cases come under my notice, that not only are persons who are exposed to the inhalation of particles floating in the air, whether mineral, animal, or vegetable, liable to precisely similar symptoms, and present exactly the same physical signs, but that they occur as the very common consequences of the bronchial affection following measles, and more especially of whooping-cough in childhood.

Dr. C. Holland, while speaking of the morbid appearances presented by the lung, mentions some which he regards as peculiar to "grinders' phthisis." Previously, however, to any real peculiarity being recognized and acknowledged to exist therein, it should be clearly stated whether he has or has not, in his account, conjoined the appearances presented by *each of the two classes of disease* which are essentially distinct. He mentions, for example, the frequent occurrence of pleuritic adhesions and other indications of by-gone inflammatory attacks. These are, according to general experience, exceedingly common in ordinary tuber-

cular phthisis, but comparatively rare in chronic bronchitis. Again, he speaks of the great venous congestions occurring generally throughout the lungs, or in defined portions of these organs. This, I conceive, will be generally acknowledged to be constantly met with in bronchitis and emphysema; but not to be very commonly seen in genuine phthisis. No mention is made of the state of the heart. This is the more remarkable, as dilatation, particularly of the right side of that organ, almost universally co-exists with the former complaint, but is not noticed as a common occurrence in the latter.

The conclusions which may be derived from Dr. Holland's facts, then, appear to be, that grinders are liable to two forms of disease, presenting remarkably different symptoms and physical signs during life, and probably followed by various morbid appearances after death. Both these forms of complaint, however, Dr. Holland seems to regard as only varieties of phthisis. In both he speaks of "cavities and degeneration of the lungs."

Considerable darkness and doubt, notwithstanding the extended labours of the author, still involve the true pathology of the disease familiarly known as "pointers' asthma" or "grinders' rot." This darkness I would respectfully invite Dr. Holland, by enlarging the sphere of his inquiries, to assist in dispelling; this doubt I would solicit him, by extending his observations, to remove, as from his position among the grinders of Sheffield, the interest he has already exhibited in their welfare, and the investigations in which he has already engaged, he appears to be especially fitted for the purpose. By effecting this, the author may not only render essential service to the pathologist in removing a portion of the uncertainty which, notwithstanding all that has been written, still appertains to the site and morbid anatomy of tubercles, but he may possibly, and not very improbably, confer a very important benefit upon mankind at large, by clearly establishing, from facts collected upon a very large scale, some of the exciting causes of tubercles, and some of the circumstances which oppose or prevent their deposition.

To effect this purpose large numbers and frequent and minute dissections

after death are absolutely necessary. The direction of the inquiry which I take the liberty of submitting to the consideration of the author will be indicated by the succeeding observations.

It has been remarked by others, and it has long been observed by myself, that though in tubercular phthisis certain small defined portions of the lung may be affected to a very great extent with emphysema, yet that when the emphysema is general and the tubes are dilated, the lungs are found especially free from tubercles. So commonly, indeed, has this fact been presented to my notice—so very rarely, among the vast number of lungs that I have myself examined, or seen examined after death, have I seen tubercles in the lungs to coexist with general emphysema of those organs, that I have long been in the habit of regarding the presence of the latter almost in the light of a safeguard against the former. Persons who during childhood have suffered severely from pertussis, and who during their youth and manhood have been more or less frequently troubled with cough and bronchorrhœa, are, as age advances, affected, not with tubercular, but with emphysematous lungs; or what is commonly called asthma. With this are generally combined dilatation of the bronchial tubes, and enlargement of, particularly the right side of, the heart. The same may, I believe, be said of persons affected from their youth or infancy with contorted spine and consequent malformation of the thorax, who have been supposed, but I think quite erroneously supposed, to be especially prone to consumption. The complaint of which they most commonly die is not consumption, but emphysema, and consequent dilated heart, ascites, hydro-thorax, and pulmonary apoplexy; the whole of which appear to be in great measure the purely mechanical effects of obstruction to the passage of blood through the emphysematous lung; a condition which, at least in many cases, is itself a simple mechanical effect of long-continued bronchial disorder.

I have stated that the presence of long-standing bronchitis and emphysema, has very rarely indeed, in my experience, been associated with tubercles. I trust that it will not hence be inferred that I suppose that the induction of emphysema (if even it could be as-

surely induced by an artificial process), is followed by the removal of tubercles already existing, and more especially that I at all believe, according to the asserted theory of a metropolitan physician, that the pressure of a lung increased in bulk by the enlargement of its cells ever does, or can, cause the walls of tubercular cavities to adhere, and thus lead to the cure of advanced consumption. The appearances so confidently brought forward in support of this dogma can be sufficiently and satisfactorily explained, quite independently of such an improbable supposition.

In conclusion, then, I will inquire of Dr. C. Holland—

1st. Whether in the class of cases which he has observed to be accompanied with emphysema of the lung and dilatation of the bronchial tubes, tubercles *generally* exist in the lungs.

2dly. If tubercles *ever* exist when the emphysema is universal.

3dly. Whether what he has termed "cavities and degeneration of the lung" in these cases, really appertain to the pulmonary tissue itself, and whether the cavities may not possibly have been sections of the bulbous extremities of dilated tubes, instead of tubercular abscesses or small vomicae, from which I know by experience they are not easily distinguishable, without very minute examination.

4thly. Whether tubercular, or what he denominates "hereditary phthisis," is really *more*, or whether it is *less*, common among grinders than among other persons *placed in precisely similar circumstances in respect to food, clothing, confinement, position of the body, and hereditary predisposition*.

The whole of these, it will be at once seen, resolve themselves into the single question of the constant irritation of the bronchial lining membrane from mechanical causes, and the consequent production of dilatation and emphysema, being favourable to, or actually opposing, the deposition of the bodies called tubercles, or other unorganizable matter, upon the presence of which in the lung true phthisis essentially depends.

That the existence of such irritation does not necessarily prevent the development or softening of these bodies or this matter when already existing in the lungs, is sufficiently proved by the facts

stated by Dr. Holland. Independently, therefore, of any other evidence than that afforded by his book, it is clear that the induction of catarrh or bronchitis cannot be properly or consistently prescribed as a remedy, and much less as a cure, for phthisis pulmonalis.

MEDICAL EVIDENCE IN BELANEY'S CASE.

To the Editor of the Medical Gazette.

SIR,

WILL you do me the favour of inserting this letter in as early a number of your journal as may be convenient; it is an answer to one I have just seen, and which appeared in the Herald of the 17th inst., purporting to be a review of the medical evidence given by myself and Dr. Thomson at the late trial of Belaney, and accusing us of *having allowed ourselves to be directed by general evidence, of having assumed wrong premises, and drawn conclusions from them which were not warranted*: three charges, sufficiently grave and serious to call for a reply, especially as they are put forth by a medical professor under the form of a scientific dissertation. I can, and do, sympathise with the Rev. Belaney, and hope that no word or act of mine will give a tone to the general impressions which are everywhere formed respecting the unfortunate death of his brother's wife; and I assure him that I was actuated by the same feelings when I entered the Court to give evidence at the trial, being convinced that general reports neither did, nor could, come within the scope of my inquiries, which had reference merely to the *medical facts*; and for the purpose of arriving at these, and removing every tittle of doubt or objection which ingenuity might raise against them, I had instituted experiments under every variety of form and circumstance, the results of which, and not of any readings or hearsay, I detailed honestly and as clearly as I could to the jury, never allowing myself for one moment to be swayed by a double-meaning question, or by any party feeling; and it must also be remembered that I was not unaccustomed to such investigations, but that the circumstances of my position had for many years demanded an almost daily examination into them.

Among the wrong conclusions with which Dr. Glover charges us, are the following:—He says, I had no right to assume that the *cry* of Mrs. Belaney was a *shriek*, or that it was the effect of the poison. Now I do not know that I have anywhere made such an assumption. It is merely asked of me, whether animals, under the influence of prussic acid, do not cry out? To which I answer—*yes*, that it is a constant effect: and then it is inquired of me whether, after this cry, there would be a possibility of walking to bed and telling the cause of the disaster? To which I reply, “*Certainly not!* for after the shriek all sensibility and volition cease.” And Dr. Thomson confirms my statement. This was no answer given hastily and inconsiderately, but sought for amidst multitudes of experiments and observations; nor is it in any way invalidated by the case quoted from Christison, or, indeed, by any case within my knowledge that has ever been upon record. There can be no doubt, as this and other cases show, of a capability of speaking after the exhibition of the poison; but this is not the argument; it is, whether there can be conversation *after the shriek*—which I maintain is impossible. With respect to the other question, whether Mrs. Belaney’s cry was a mere call to her husband, or a scream resulting from the poison, I have never offered an opinion, although Mr. Garrett stated in his evidence that Belaney told him it was a *scream*.

Again, according to the husband’s statement, Mrs. Belaney called the drink *hot*; and I am asked, if prussic acid has a hot taste? and reply, “No; that its taste is bitter.” I have tasted it again and again, and on two occasions in quantities sufficiently large to produce faintness; yet Dr. Glover maintains, by an unnecessary, an inapplicable, and a most unlearned dissertation upon the chlorides, bromides, and iodides of cyanogen, that it *must* be hot,—though I cannot see how this affects the matter of fact arrived at by myself and another, who is nearly the only individual who has lived to record that *its taste is inexpressibly bitter*.

In next part of the review, Dr. Glover pronounces our answers to be an outrageous piece of cruelty. It was known that Belaney, although he called himself a medical man, used no efforts to

recover his wife, and we are asked whether the remedies for prussic acid are generally known in the profession? To which we reply, that they should be, inasmuch as they are everywhere taught; and I think that we were warranted in making such a reply, when it is remembered that for sixteen years or upwards they have been publicly and emphatically taught in our schools, and are constantly being brought before the profession in one form or another; that we have professed works and journals, and charts, to teach them to us; and if Dr. Glover’s “old and young acquaintances, who are in active practice,” do not happen to know them, it can surely never palliate, or in any way remove the culpability of the charge of gross neglect and ignorance; nor can it be admitted as an argument of the universality of such ignorance: if it did, Heaven knows, there is necessity enough for reform in our profession; but most singularly, when Dr. Glover finds it convenient to make Belaney a judicious looker-on, he argues for the propriety of his conduct, and says, that when he stood by ready with his lancet, he was acting in accordance with the views of Orfila, Christison, Magendie, and others. And why, may I ask, did he not further act in accordance with common affection and common honesty, and try to save her? To crown the whole of this part of Dr. Glover’s review, he tells us that *we do not know the remedies ourselves*; notwithstanding the whole tenor of our evidence, that she might have been saved.

Lastly, as regards our opinion, that a smell would exist for some time in the room where prussic acid had been spilt, Dr. Glover expresses his dissent *in toto*, although it has been stated that my conclusions were drawn from experiments made under circumstances as nearly as possible like those of the case in question; and in conclusion, without staying to comment on the pseudo-scientific character of the review, meant evidently to catch the popular ear. I will merely express a wish that it had been written with a more “*conscientious spirit*.”—I am, sir,

Your obedient servant,

HENRY LETHEBY, M.B.

Lecturer on Chemistry at the
London Hospital.

12, Tredegar Square, Oct. 31, 1844.

EXPERIMENTS ON THE FORMATION OR SECRETION OF CARBON BY ANIMALS,

THE DISAPPEARANCE OF HYDROGEN AND
OXYGEN, AND THE GENERATION OF
HEAT DURING THE PROCESS.

To the Editor of the Medical Gazette.

SIR,

IN a former communication I stated how experiments may be made which prove that animals secrete carbon. On this occasion I purpose describing experiments from which it may be inferred that this formation or secretion of carbon is accompanied with the disappearance of hydrogen and oxygen, and the generation of heat.

Two young mice, the one weighing 210 and the other 218 grains, were placed in a round wire trap, five inches in diameter, and supplied with bread and water only. During the first six weeks they were supplied each day with 110 grains of bread, slightly moistened with water, and containing 29.7 grains of carbon. The mean weight of carbon in the respired air

First twenty-four hours . . .	8.9	cubic inches	per hundred,	213.6	cubic inches	per diem.
Second twenty-four hours . . .	6.6	"	"	158.4	"	"
Third twenty-four hours . . .	5.4	"	"	158.4	"	"
Second twenty-four hours . . .	5.0	"	"	60.0	"	"

ing 73.4 grains of carbon. The weight of the two animals was, after the first thirty hours, 205 and 217 grains respectively; and, at the expiration of the eighty-four hours, 178 and 194 grains; the one having lost 6.4, and the other 7.4 grains in weight.

For six days from this period they were supplied three times a day with as much bread, in its usual state of moisture, as they could eat; and as

given off during this period was 38.8 grains per diem. The animals increased in weight respectively to 242 and to 268 grains.

Desirous of reducing the weight of the carbon comprised in these animals as low as possible, without depriving them of life, they were placed under experiment for eighty-four hours; fed daily with only 24 grains of bread, made into a thin pulpy mass with 50 grains of water,—a mixture which has a very reducing effect upon these kind of animals. They were also placed between the hours of 5 A.M. and 10 P.M., at intervals of half an hour, near the top of an inverted glass jar, contents 206 cubic inches; atmospheric communication being cut off by mercury. During the first day they were kept in this situation for half an hour, and during the rest of the period for an hour each time.

In the morning, when the animals were in a state of repose, the volume of carbonic acid they gave off was comparatively small. In the night, when they were always most active, the volume was comparatively great. The mean volume was, for the

Total . . . 561.6 cubic inches, containing much water as they would lap from a drop tube. In the six days they consumed 780 grains of bread, containing 210.6 grains of carbon, and from 100 to 110 grains of water; increased in weight to 256 and 276 grains, and imparted to the atmosphere 249.7 grains of carbon. The increase in weight, and the weight of carbon in the respired air, in each twenty-four hours, was as under:—

	Weight of mice.	Carbon in respired air.
First twenty-four hours . . .	227 and 242 grains	33.9 grains.
Second twenty-four hours . . .	230 and 248 "	39.5 "
Third twenty-four hours . . .	240 and 255 "	43.4 "
Fourth twenty-four hours . . .	246 and 259 "	43.3 "
Fifth twenty-four hours . . .	252 and 268 "	44.0 "
Sixth twenty-four hours . . .	256 and 276 "	45.6 "

249.7 grains.

At the end of the sixth day the heavier animal, which was of comparatively quiet habits, was killed, by placing it in a small tube standing over mercury. It was then exposed to a temperature varying from 200° to 220°

for two days, by which it was reduced in weight to 86.6 grains. The whole animal was reduced to one mass in a mortar, and an average sample, on being analysed with oxide of copper, gave, for the constitution of the

DRY MOUSE.		
	Per cent.	Whole weight.
Carbon . . .	53.02	45.91
Hydrogen . . .	7.19	6.23
Oxygen . . .	18.50	16.02
Nitrogen . . .	11.19	9.69
Ashes . . .	10.10	8.75
<hr/>		<hr/>
100.		86.6

MOUSE BEFORE DRYING.		
Carbon . . .		45.91
Hydrogen and oxygen as in water . . .		207.45
Hydrogen in excess . . .		4.20
Nitrogen . . .		9.69
Ashes . . .		8.75
<hr/>		<hr/>
		276.

The other animal, which was of active habits, was allowed to remain at rest for two days, having as much bread and water as it would consume, but did not increase in weight. It was afterwards supplied with a very sparing quantity of food, consisting of ten grains of bread and ten grains of water

each day, for four days; and kept one day and six hours without any food. During this period it was kept, as above described, within a glass jar, atmospheric communication being cut off by mercury, and gave the following results:—

	Weight of mouse.	Decrease.	Carbon in the		Increase.
			Food.	Respired air.	
First twenty-four hours . . .	235	21	none	2.13	21.3
Second twenty-four hours . . .	217	18	2.7 grs.	15.9	13.2
Third twenty-four hours . . .	196	21	2.7 "	11.8	9.1
Fourth twenty-four hours . . .	182	14	2.7 "	7.7	5.0
Fifth thirty hours . . .	169	13	2.7 "	7.0	4.3
<hr/>		<hr/>	<hr/>	<hr/>	<hr/>
			10.8	63.7	52.9

The animal in this reduced state was killed, and dried in the manner above

described, when its weight was 51.5 grains, and was constituted of—

DRY MOUSE.		
	Per cent.	Whole weight.
Carbon . . .	43.70	22.50
Hydrogen . . .	5.82	3.00
Oxygen . . .	20.72	10.67
Nitrogen . . .	13.36	6.88
Ashes . . .	16.40	8.45
<hr/>		<hr/>
100.		51.5

MOUSE BEFORE IT WAS DRIED.		
Carbon . . .		22.50
Hydrogen and oxygen as in water . . .		129.50
Hydrogen in excess . . .		1.67
Nitrogen . . .		6.88
Ashes . . .		8.45
<hr/>		<hr/>
		169.

The experiments were conducted in the following manner. All foreign supply of food was cut off by keeping the animals in a wire trap, out of which they were never taken, except for the purpose of being weighed, which was performed in a few minutes. They were fed with average samples of crust and crumb of bread, weighed when new, and kept in its moist condition under an inverted glass, which also covered a cup containing water. These samples of bread were not separately analysed; but the highest per centage of carbon obtained by analysing other samples of this kind of bread, was calculated for in these experiments. The weight of carbon in the respired air was obtained by calculation from the volume of carbonic acid, which was determined by removing with a syringe samples of the air from within the inverted glass jar, at the end of each period of the animals' confinement in the limited atmosphere, transferring this

air to apparatus standing over mercury in which $\frac{1}{1000}$ of its volume could be read, absorbing the carbonic acid by liquor potassæ, making the necessary barometric and thermometric corrections, and an allowance for the carbonic acid in the common atmosphere of $\frac{1}{2000}$ of its volume*. The weight of the animals was obtained by placing the trap in a gauze bag, in which they were separately weighed after removing the trap. The trap was then cleaned, and the animals returned to it again. The weight of each element was determined by a method of analysis which combines expedition with ease and accuracy.

By placing the results thus obtained in tabular forms, those features which more particularly claim attention at the present time will be brought more prominently before us.

* Animals and birds die in a few hours on being kept in an atmosphere from which all the carbonic acid is immediately removed.

	Weight of mice. grs.	Weight of bread. grs.	Weight of Carbon in		
			Bread. grs.	Respired air.	Increase. grs.
At the commencement . . . }	210 }				
	218 }				
After six weeks' moderate supply of food . . . }	242 }	4620	1247	1630	383
	268 }				
After eighty-four hours' limited supply of reducing food . . . }	178 }	84	22.7	73.4	50.7
	194 }				
After six days' abundant supply of food . . . }	256 }	780	210.6	249.7	39.1
	276 }				
After five days' and a quarter sparing supply of food. One mouse . }	169 }	40	10.8	63.7	52.9
Total increase 525.7					

From what is shown in this table it may be inferred that these animals have the power of secreting carbon; and that this power is constant whether the animals are kept upon a sparing or plentiful supply of food. The total weight of carbon secreted during the period they were under experiment forms 99 per cent. of their greatest, and 141 per cent. of their least united weights, and when the weight of the carbon in the respired air is compared with the weight of the carbon in the food, they are to each other—

Carbon in the food 100
Carbon in the respired air 136

That this secretion of carbon is effected by the disappearance of hydrogen and oxygen, is inferred rather than directly proved by the experiments; we cannot, as with plants, in proving that carbon and nitrogen are vegetable secretions, keep the animals in the same

limited atmosphere for many days or weeks together. When the evidence, however, sought out of these experiments is taken in conjunction with that of other experiments, which proves that the change effected upon the atmosphere by animal respiration is principally confined to that of changing a volume of atmospheric oxygen into a volume of carbonic acid, we may safely draw the inference, that some of that hydrogen and oxygen which forms a portion either of the food or of the animal itself, or of both, undergoes some process of natural chemistry, having this secreted carbon as a result. This will become fully illustrated by calculating for the weight of the elements in the two animals at the different periods, agreeably to the results obtained by the analysis, and by drawing lines of comparison in the following manner, viz.

The two mice at the commencement.	Carb. 71.2.	Hy. and ox. as in water 316.6.	Hy. in excess 6.1.	Nitr. 17.9.	Ash. 16.2.	Total 428.
After six weeks	84.8	382.4	7.7	17.9	17.2	510
After eighty-four hours	49.5	286.4	3.7	15.2	17.2	327
After six days	88.5	399.5	8.1	18.7	17.2	235
After five days and a quarter, one mouse .	22.5	122.5	1.7	8.4	8.4	169

Which upon a recapitulation of the carbon, the hydrogen, and oxygen, as in water, and the hydrogen in excess, gives for the

First six weeks' moderate supply of food

	Carbon.	Water*.	Hydrogen.
At first Animals	71.2 }	316.3 }	6.1 }
Bread	1247.0 }	3231.0 }	9.2 }
Water		630.0 }	
At last Animals	84.8 }	382.4 }	7.7 }
Respired air	1639.0 }		
	+ 396.6	— 3797.9	— 7.6

* A considerable portion of water would evaporate from the bread when in the trap, and before it was eaten.

Eighty-four hours' reducing food.

At first	Animals	84·8	} 107·5	382·4	} 610·4	7·7	} 8·0
	Bread	22·7		58·0		·3	
	Water			170·0			
At last	Animals	49·5	} 122·9		} 286·0		} 3·7
	Respired air . . .	73·4					
			+ 15·4		— 324·4		— 4·3

Six days' abundant supply of food.

At first	Animals	49·5	} 260·1	286	} 932	3·7	} 5·3
	Bread	210·6		546		1·6	
	Water			100			
At last	Animals	88·5	} 338·2		} 399·5		} 8·1
	Respired air . . .	249·7					
			+ 78·1		— 532·5		+ 2·8

Five days' and a quarter very sparing supply of food.

At first	Animals	42·6	} 53·4	192·6	} 260·6		} 3·9
	Bread	10·8		28			
	Water			40			
At last	Animals	22·5	} 86·2		} 129·0		} 1·7
	Respired air . . .	63·7					
			+ 32·8		— 131·6		— 2·2

From these results we may fairly draw the inference that the secretion of carbon in animals is accompanied with the disappearance of water and hydrogen; and these results would have appeared in a still more favourable light if the excrementitious matter had been taken into account, which in these experiments was always mixed with small crumbs of bread. This matter was not analysed; but its quantity, when the animals are plentifully supplied with food, forms about seven per cent. of the weight of bread, and contains about thirty-five per cent. of its weight of carbon. It formed a considerable proportion of the weight of the food consumed during the eighty-four hours the animals were supplied with food of a reducing tendency, but

a very small proportion when the animal was fed with dry food. If we add to the plus quantity of carbon in the above table, as much carbon for that contained in this matter as will make the weight of that secreted during the first six weeks 500 grains, during the eighty-four hours 24 grains, during the six days 96 grains, and during the five days and a quarter 35 grains, we may consider this body fairly represented in these experiments.

Until we have other experimental evidence which more fully proves that when animals secrete carbon, hydrogen disappears in a proportion exceeding that in which it forms water, let us in this instance make our calculation as if water only disappeared: we shall then have in the—

	Hy. and ox. in the animals, bread and water.	Carbon secreted therefrom.	Hy. and ox. passed off by other means.
In the first six weeks	3798	500	329 grains
In the eighty-four hours	324	24	300 „
In the six days	533	96	437 „
In the five days and a quarter, one mouse .	131	35	96 „

The secretion of carbon resulting from the disappearance either of hydrogen and oxygen in the proportions in which they form water, or from the former in a higher proportion, our knowledge of the specific heats of bodies leads us to infer that heat will be generated during the secretive pro-

cess; and by calculating for the heat generated by the formation of the carbonic acid in the respired air, and for that generated by the formation or secretion of the carbon in these experiments, we have the two heats bearing the following proportions:—

	Heat generated by the formation of carbonic acid.	Heat generated by the secretion of the carbon.
In the six weeks	100	325
In the eighty-four hours	100	346
In the six days	100	412
In the five days and a quarter	100	590

Hence we infer that these animals generate from three to six times the heat by the formation of the carbon they secrete, as by the formation of the carbonic acid they respire; and that this secretion of carbon, and consequently, generation of heat, is influenced by the quality and the quantity of food, exertion, and quiet and active habits.

I might further observe that since all my experiments, whether made with animals or with birds, prove that car-

bon is secreted by them, in proportions varying with the circumstances under which they are placed, I conclude that the formation or secretion of carbon is essential to the support of animal life, and that it is a great source of animal heat.

I am, sir,
Your obedient servant,
ROBERT RIGG.

Greenford, Middlesex,
Sept. 27th, 1844.

POINTS OF PRACTICE.

By A. L. WIGAN, M.D.

OFFENSIVE BREATH.

To the Editor of the Medical Gazette.

SIR,

AMONG the diseases unattended by pain and danger, there is not, perhaps, one which gives annoyance so severe, and unhappiness so intense and complicated, as that selected for the subject of the present letter. I have known it lead to suicide, by rendering the sufferer disgusting where he most wished to excite interest and affection. Long does the unhappy man resort to useless stratagems, and *hope against conviction* that his malady is not perceived by others—and no one ventures to tell him of a defect so humiliating. He dares not ask advice lest he should communicate the knowledge of the fact, where he still hopes it has not been perceived, so year after year he goes on in the disheartening consciousness of degradation, when perhaps the shame and anxiety might have been relieved in a single hour, had he had the courage to make an open confession to a man of experience.

It is obvious that a great many of the causes of this vexatious annoyance are quite out of the reach of remedy. It is unnecessary to enumerate them, as they will suggest themselves to every one.

Faithful to the plan I announced in my first letter, I shall confine myself to the diseases and defects for which I can suggest a positive and efficient remedy. One of the most common causes of offensive breath, and by far the most disgusting, is removed with the greatest ease. I cannot recollect to have ever met with a notice of it, and the dislike of the patient to complain, and the surgeon to inquire, may perhaps explain this.

The tonsils, then, are subject to a peculiar abscess, if it may be so called—the tumor is of the kind called, formerly, melicerous steatoma, but of its modern name, in these days of incessant change, I know nothing. Many years elapse in its progress to maturity, during which the only annoyance experienced is from the mechanical obstacle to deglutition, and to the command of the voice. From time to time inflammation takes place, and the usual inconveniences are felt of quinsy, not going on to complete suppuration. The glands increase in size on each attack, but generally subside again into their usual state.

After one of the attacks, however (several weeks after the active symptoms have disappeared), a small perforation is formed by ulceration, perhaps not larger than the head of a pin. From time to time, a small particle of the contents of the sac escapes, and produces the most horrible stench. I

have more than once known a patient faint, from the disgust and sickness produced. This is renewed time after time, month after month, and year after year, making his life an intolerable burthen. The act of swallowing will sometimes press out a portion larger than usual, and this will produce long-continued vomiting.

From the humiliation felt at communicating with a friend or acquaintance, the sufferer usually resorts to a quack doctor, who, aided by a quack dentist, contrives to fleece him pretty handsomely. When the two have drained his purse effectually, he buys pastilles and lozenges, and cheats himself into the hope that the hot spices overcome the offensive odour.

The remedy is so obvious, that I should hardly think it necessary to name it, but for the purpose of introducing to the notice of the reader a little instrument which I was in the habit of using for many years, and which very much facilitates the management of this and similar enlargements of the tonsils; more especially in the aggravated form of *cynanche tonsillaris*, where it is difficult to open the mouth. I have drawn it exactly of its proper size, and think it is much safer and much more manageable than the common pharyngotome. To poke about in the dark with a pointed instrument, and *push from you* to open an abscess, is sometimes a very awkward affair, and to the man who has not *eyes at the ends of his fingers* (which I believe is the case with the greater number of us), it is extremely embarrassing. With the instrument represented in the margin, it is scarcely possible to have an accident, even where the mouth can be opened only wide enough to admit the introduction of it edge-ways.

In the melicerous abscess which gives rise to offensive breath, this difficulty does not exist. The reason why the hook, *cutting on the inner edge only*, is so useful, is, that sometimes there are several sacs, or divisions in the sac, and when the tumor is rendered flaccid by the escape of a part of its contents, it is very difficult to pierce it with the lancet or pharyngotome, whereas, with the instrument here described, you have only to catch any portion and pull towards yourself, to make any extent of incision you may require.



venient to him to procure ice, let him dissolve some in it, and use water equally cold as a daily gargle. The addition of a little tincture of myrrh is useful.

In all cases where the tonsils are liable to disease, let him make a practice of going with his neck entirely open for as large a portion of the twenty-four hours as his domestic arrangements will allow.

A. L. WIGAN.

ON THE BEST METHOD
OF
FINDING THE SPECIFIC GRAVITY
OF POWDERS.

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To the Editor of the Medical Gazette,

SIR,

IN making some experiments lately upon the specific gravity of different powders, the following plan seemed to possess some advantages, in point of convenience, over the one usually adopted. The great objections to the extremely ingenious method proposed by Sir J. Leslie, are the trouble and risk of breakage in operating with a slender glass tube, above thirty inches long, and the somewhat complicated calculations required by it; both of which appear to be much lessened by the plan which I have employed.

The great difficulty in estimating the specific gravity of powders has always been occasioned by the air which is mechanically mixed with them, and the consequent uncertainty as to the actual volume of the powder itself. If the powder to be examined be immersed in water, and the vessel containing it is put under the exhausted receiver of an air-pump, the air, being relieved from pressure, rises in bubbles through the water, and leaves the powder free. The method of applying this principle is very simple. Take a

common specific-gravity bottle, capable of containing 500 or 1000 grains of water, and counterpoise it. Then take any quantity, 50 or 100 grains, of the powder to be examined, and introduce it into the bottle, and fill this with distilled water. Place it under the air-pump receiver, and exhaust the air. When the escape of bubbles ceases, it will be found that the bottle is not full. Fill it, and weigh it. By subtracting the weight of the powder from the total weight, the quantity of water in the bottle is found; and by subtracting this from the quantity which it is capable of holding, we ascertain the space unfilled with water, which is therefore occupied by the powder. Then, as the weight of the deficiency of water is to the weight of the powder, so is the specific gravity of water to the specific gravity of the powder.

To illustrate this by an example: a specific-gravity bottle was taken, capable of holding 500 grains, and 50 grains of iodine were introduced. The bottle was then filled with water, but was weighed previously to being put under the air-pump. It weighed 539 grains. It was then placed under the receiver, and the air exhausted. On the addition of water, to fill it up, it weighed 540·75 grains. As the powder itself weighed 50 grains, there were 540·75 grs.—50 grs.=490·75 grs. of water in the bottle; and the powder, therefore, occupied the space of 500 grs.—490·75 grs.=9·25 grs. of water. Then,

Wt. of Water.		Wt. of Iodine.		Sp. gr. of Water.		Sp. gr. of Iodine.	
As	9·25 grs.	:	50 grs.	:	1	:	5·4

This result differs from that of Gay Lussac, who found it to be 4·948; and his statement is usually adopted by chemists; but it differs much less than that of Dr. Thomson, who found it to be only 3·084. On comparing the weight found before exhausting the air, it will be seen that the presence of

a small quantity might materially alter the result. In the first experiment, the contents of the bottle weighed 539 grains, which gives 489 grains as the weight of the water; and this subtracted from 500, leaves 11 grains as the quantity of water displaced by the iodine. Then,

Wt. of Water.		Wt. of Iodine.		Sp. gr. of Water.		Sp. gr. of Iodine.	
As	11 grs.	:	50 grs.	:	1	:	4·55

If the powder is very light, as, for example, finely-powdered charcoal or magnesia, it is much better to put it into the bottle, and exhaust the air previous to the addition of the water. This may be afterwards added, and the bottle should be replaced upon the air-pump, to remove any small quantity of air which may be thus introduced, and then weighed. The necessity for this

precaution was rendered evident in examining charcoal; for, on commencing the exhaustion, the mixture frothed up so as to prevent the completion of the experiment. It was easily managed afterwards by removing the air previous to the addition of the water.

If the quantity of powder is small, or it is desirable not to put it into the scale-pan, it may be at once

introduced into the bottle, and weighed in it. The only objection to the adoption of this plan in all cases is, that odd numbers are introduced into the calculation instead of the even ones, 50 or 100. In the case of such substances as iodine, which acts upon the scale-pan, or charcoal, which adheres to the neck of the bottle, or to the paper by means of which it is introduced, it is much the best plan to weigh them in the bottle, and the calculation may be made as before.

Wt. of Water.	Wt. of Charcoal.
As 44.5 grs.	: 58.25 grs.

In case the powder to be examined was a salt soluble in water, spirit might be substituted, and the specific gravity calculated from it. If both water and spirit were objectionable, oil of turpentine might be used; but the same difficulties exist in finding the specific gravity of crystals in the ordinary way, and it is therefore scarcely necessary to allude to them. In many instances, even of soluble powders, these precautions may be safely dispensed with; for if the air is exhausted previous to the addition of the water, the time occupied in accurately filling the bottle

A quantity of powdered charcoal was put into the bottle, and was found to weigh 58.25 grains. It was then put under the receiver of the air-pump and exhausted. Water was added to fill the bottle, and it was again placed under the receiver, when a few small bubbles of air escaped. It now weighed 513.75 grains; and there were, therefore, 455.5 grains of water; and the space occupied by the powder was equal to $500 - 455.5 = 44.5$ grains of this fluid. Then,

Sp. gr. of Water.	Sp. gr. of Charcoal.
: : 1 :	1.3

is so short that no amount of solution would take place which could cause much error in the experiment. When the bottle was once filled, the subsequent solution of the salt would be of no consequence, as the object has been attained of finding the quantity of water required to fill the bottle, and, thereby, the space occupied by the powder.—I am, sir,

Your obedient servant,

J. BIRKBECK NEVINS, M.B. Lond.

Prof. Chem. & Nat. Phil. Coll. Instit. Liverpool.
81, Mount Pleasant, Liverpool,
October 15th, 1844.

ANALYSES AND NOTICES OF BOOKS.

“L'auteur se tue à allonger ce que le lecteur se tue à abréger.”—D'ALEMBERT.

Principles of Forensic Medicine. By WM. A. GUY, M.B. Cantab. Parts 1, 2, 3. 12mo.

It is not very long—a few months—since we noticed the two first parts of this work. Part the Third has just been published, and our critical duties admonish us that we should say a few words on its appearance. Dr. Guy's position as professor in one of our largest and most flourishing medical educational establishments seems to require so much from us; and then, having dipped into the work, we became strangely possessed with the idea that we had already read the book; every illustration seemed as familiar to us as the face of an old friend; the very turn of the language and phrases employed,—and who that writes has not his own peculiar style?—struck familiarly on our eye; and when we tried them aloud, they still fell as well-known accents on our ear. “We have

read all this before,” we exclaimed; but that is impossible; the book is but just out; published by Mr. Renshaw, and sent, parts one, two, three, to the Editor of the Medical Gazette, with the publisher's compliments. The book was old and it was new; it was familiar, yet it came in the guise of a stranger. We were not long of finding a solution of the riddle. Our attentive readers will recollect that we gave a brief notice—brief in contrast with its very ample and unusual merits—of Mr. Taylor's Manual of Medical Jurisprudence, some three or four weeks back: we spoke of it as “one of the very best books of any description we had ever read;” and so it is;—and having displayed it before us on the right hand, and in like manner displayed Dr. Guy's “PRINCIPLES” on the left, we began to con the two books paragraph by paragraph, page by page, and we said to ourself straightway—“An apple cleft in two, is not more twin: one face, one voice, one habit, and two persons—a natural perspective, that is and is not!” Who should unravel us the mystery? We remembered Mr. Taylor deeply versed in

medico-legal lore when Dr. Guy could have been little more than a school-boy—nothing more than the medical student, certainly—and we never for one moment imagined that he could have been borrowing from Dr. Guy. Had Dr. Guy been a pupil of Mr. Taylor's however, taken copious notes of his teacher's lectures, become a professor of forensic medicine on the strength of what he had learned at Guy's Hospital, and then committed the grave error of mistaking Mr. Taylor's views and information for his own, the whole difficulty would be cleared away; and having made inquiry, and been informed, that Dr. Guy had actually been a pupil at Guy's Hospital, and having further recalled to mind a short paper of Dr. Guy's, published some two or three years back, upon "the best method of keeping a common-place book," we began to see how the Professor had truly—we must imagine in all innocence—been guilty of publishing his notes of Mr. Taylor's lectures, and his extracts from Mr. Taylor's Manual, as his own Principles of Forensic Medicine. "Take your notes and extracts," says Dr. Guy, "upon separate leaves of paper, arrange them under their appropriate heads, and when you want the materials for a lecture you have but to undo the string, and, *presto!* without more ado than by help of an *and*, and a *but*, and a *however*, you have a lecture ready." The same receipt will answer for the manufacture of a book; and we feel reluctantly bound to say that Dr. Guy has followed it to the letter: the third part of his "Principles," with which we have

Taylor (p. 21),

and from

Guy (p. 401.)

"Habit, it is well known, diminishes the effect of certain poisons: thus it is that opium, when frequently taken, loses its effect after a time, and requires to be administered in a much larger dose; indeed, continued opium eaters have been enabled to take at once a quantity of the drug which would have infallibly killed them had they commenced with it in the first instance. Dr. Christison has remarked, that this influence of habit is chiefly confined to poisons derived from the organic kingdom, and I quite agree with him in thinking that the stories related of arsenic eaters, and corrosive sublimate eaters, are not to be credited. * * * As a general principle we must admit, that habit cannot altogether counteract these insidious effects of poisons, but that the practice of taking them is liable to give rise to disease, or to impair the constitution."

more particularly to do at present, is beyond all question entirely concocted from his notes and extracts from Mr. Taylor's Manual, taken on separate slips of paper, with some few interpolations from Dr. Christison's work on Poisons.

In such a subject as medical jurisprudence great latitude in seeking information from others is of course allowable—nay, is indispensable; and this we find and admire in Mr. Taylor: his references are incessant, and having, along with those who have laboured at the MEDICAL GAZETTE, still striven to make its pages *permanent records of experience in medicine*, we are flattered in seeing how largely they have contributed to aid so able a critic and so accomplished a writer as Mr. Taylor; but he who uses information of this kind must take it at the source—not at second-hand; he must bring the disciplined mind to digest and use it aright, to show it in its relations with every other part or pendant of the subject. Faust's receipt, which we quote for Dr. Guy's especial benefit, as we see he refers to one German book at least, will not answer:

"Sitzt ihr nur immer! leimt zusammen;
Braut ein Ragout von anderer Schmaus,
Und bläst die kümmerlichen Flammen
Aus euren Aschenhäufchen 'traus!"

Which being interpreted, means that it will not do to make paste and scissors do all; or, pretending to boil a pot of your own, to fill it not only from other folks' stores, but to boil it with other folks' fire.

We give but a single instance of parallel passages from—

"*Habit*.—This has the effect of diminishing the influence of poisons derived from the vegetable kingdom, but of increasing that of mineral poisons. Thus while opium, alcohol, and tobacco, lose their effect by repetition, and may be taken at length in doses which would poison a man not accustomed to their use, arsenic, and the preparations of mercury, produce more effect the longer they are taken. * * * It must be borne in mind, however, that even those substances, to the action of which the system most easily adapts itself, produce permanently injurious effects on the system."

This, to the critical reader, will suffice—it is Taylor condensed and abridged; it is Taylor done into Guy. But it would be easy for us to show much more, and even more remarkable appropriations; information that is singular in Mr. Taylor's Manual set down as if it were familiar and common in the Principles; points that belong to the Manual in peculiar, misapprehended and set down amiss in the Principles; as where Dr. Guy says (page 456) that by applying heat to the dry arsenite of copper we procure a ring of *metal*: it is arsenious acid that is sublimed, and the experiment is Mr. Taylor's own, and was devised as a means of verifying the nature of the green precipitate of copper; even defects or errors in the Manual are copied into the Principles, as where the quantitative analysis of sulphuret of lead (p. 943) is given, 100 parts = $86\frac{1}{2}$ metallic lead, and Dr. Guy says "the corresponding quantity of the several salts may be ascertained by simple calculation." But we defy him to do any thing of the kind; and the question in a case of poisoning is never as to the quantity of metallic lead in a salt, but as to the quantity of the poisonous salt that has been administered, judging from the quantity discovered in matters vomited, or found in the contents of the stomach after death, and which is to be ascertained in the readiest way by converting that salt into a sulphuret, as stated by Mr. Taylor, who could only have meant thereby to obtain a standard by which to estimate the quantity of the poisonous salt of lead which had been swallowed: such and such a proportion of this salt, corresponding with 100 of the sulphuret. The deficiency in the Manual, however, is not corrected in the Principles—it is left a blank, save to the far-advanced reader, as it is in the Manual.

To conclude, we refer Dr. Guy first to a passage in Marx's *Aecsius*, published in last week's *GAZETTE* (p. 185), where he says: "The *intaglio* of the accomplished observer and collector is often used by the ready penman for making a cast from *relief*. His business is to make his work as much like a foundling hospital as possible, where the parentage of no individual can be known; nevertheless it very commonly shows like an orphan asylum in the

end,—it still bears unquestionable evidence, at all events, of the poverty of its immediate origin."

If Dr. Guy can lay his hand on his heart, and say that he has not used Mr. Taylor's *intaglio* to make a cast from *relief*, calling the copy his own original work—that he has used no effort to disguise the parentage of his matter, arrangement, and conclusions—but that having heard Mr. Taylor's lectures long ago, and diligently taken notes—having also read Mr. Taylor's manual carefully, and made copious notes and extracts therefrom—having put these several notes and extracts up for some short time within the boards of his common-place book, to undergo concoction and maturation, and then taken them down, strung them together in a semi-vacuous or wholly oblivious state of mind as to the sources whence they were derived, and published the *refaciamento* as his "*Principles*,"—we shall try to find an excuse for him, and even do all in our power to help him out of the dilemma in which he has unwittingly placed himself. If he cannot do all this, let him immediately recall the bastard which he has christened and sent into the world with his name. The miserable urchin who picks a pocket to the value of a shilling is sent to Bridewell for six weeks for the deed: shall there be no moral tribunal to adjudge in cases of larceny of a kind no less disgraceful than pocket-picking, though they may not perchance be cognizable before the magistrate, nor to be estimated in the current coin of the realm? We cite Dr. Guy before our tribunal, and require him to purge himself of the moral delinquency with which we charge him,—the appropriation of another man's labours, not only without due acknowledgment,—which would not yet excuse the misdeed, but with a studied purpose to conceal the theft.

MEDICAL GAZETTE.

Friday, November 15, 1844.

"Licet omnibus, licet etiam mihi, dignitatem
Artis Medicæ tueri; potestas motio veniendi in
 publicum sit, dicendi periculum non recuso."

CICERO.

THE DILEMMA, AND REMEDY
THE FIRST.

ASSOCIATION OF THE GENERAL PRACTI-
 TIONERS WITH THE ROYAL COLLEGE OF
 PHYSICIANS.

THE great body of the profession are cut off from the stock to which they clung with a kind of insensate partiality, like the pliant vine to the sturdier elm, in classical language or allusion. The Council of the Royal College of Surgeons have utterly rejected 11,700 of the 12,000 members of the College; that is, they have rejected 39 in every 40 of the gentlemen who all entered on the same grounds of qualification, and after having had their competency tested by the same process of examination. Will the members of the Royal College of Surgeons sit down contentedly under this? If they do, it is their business, not ours; but if they do, let them write themselves worthy of the unworthy usage they have received. As members of the College of Surgeons we have done with them; but we have still a duty to perform to the MEDICAL PROFESSION, and through this to the public. We are Quixotic enough to love and admire the medical profession apart from the lucre of the thing, and the fees it brings as means of present existence; we would ennoble it, and fain hold every even its humblest member as a mortal made of a kind of better clay; he ought to be so at all events; and it seems to us to be the sacred duty of all who feel a spark of the fire divine within their breasts, to strive to make him so. The College of Surgeons reject their members who are also licentiates of the Apothecaries'

Society. They desire to constitute themselves a College of pure surgeons. Be it so: we do not object. But we do not think it advisable that the general practitioners should imitate the example thus set, and associate themselves into a separate College; and this for very sufficient reasons, which we shall give more at leisure; we see no necessity for the step; we have Colleges enow already; and then we see a provision in the acts and statutes of the Royal College of Physicians, which, did that old and most respectable body see fit, might be made to meet the present exigency, and would provide for the future standing, and, we venture to add, increased respectability, of the general profession of medicine in England.

"The College of Physicians," says Dr. Davies*, "has invariably guarded the rights of its members to practise surgery, from the 32d Henry VIII. down to the present time. As the law stands, a physician, if belonging to the College of Physicians, may practise surgery in any part of England." "And forasmuch," says the act referred to above, "as the science of physic doth comprehend, include, and contain a knowledge of surgery, as a special member and part of the same, therefore be it enacted, that any of the said company or fellowship of physicians, &c. may practise and exercise the said science of physic in all and every of its members and parts, any act, statute, or provision made to the contrary, notwithstanding." This is quite sufficient: Wherefore should not the Royal College of Physicians proclaim itself ready to open its doors to every gentleman, a general practitioner, who has complied with the regulations of the two corporate bodies whose examination he has successfully undergone? There is the very title

* Exposition of the Laws that regulate the Medical Profession.

ready made at the College of Physicians for general practitioners—*Licentiates*—from among whom any higher grade that the College might still be disposed to retain might be recruited.—There have been distinguished Fellows of the Royal College of Physicians before now, who were first Apothecaries and then Licentiates. The present order of Licentiates of the College, who are all graduates in medicine, and have for the major part complied with regulations in regard to education, hospital attendance, and length of study, of sufficient stringency, might be raised to the honour of the Fellowship at once, and the new Licentiates substituted in their stead. Nor would we have any invidious distinction drawn between these gentlemen and any who may enter in conformity with any prospective regulations which the College of Physicians might see fit to make in reference to the admission of future Licentiates.

The way in which the affairs of the College of Physicians have for several years past been administered, have given the greatest satisfaction to all who have been connected with the body: invidious distinctions, based on the University where a man chanced to have taken his degree, but could not have obtained his medical education, have been abandoned: he who laboured diligently at his profession, and maintained his private honour unsullied, was sure to be noticed, and in due season to be selected for the fellowship. There has been no heartburning or quarrelling between the College of Physicians and its licentiates or members for many years past, nor need there be anything of the kind again.

This plan of uniting the great body of the profession of medicine under shelter of the most venerable, most learned, and despite of everything that may be said to the contrary, most re-

spectable of all the divisions or conventional designations of a profession that is truly one and indivisible, appears to us fraught with even greater prospective than present advantages. It is only in this country that medicine is held in less esteem than surgery. Did we grant that surgery is perhaps generally more interesting to the individual than medicine; we should still maintain that medicine, allied with its liberal studies, is vastly more important to the mass: he who has a gangrened leg requires the surgeon to take it off, and would be lost were there not the friendly steel at hand; but endemic disease, and epidemic or pestilential disease, walk over the land, and bring the lives of thousands at once into jeopardy, and medicine steps in, investigates the causes of the distemperature, and, mitigating or annulling these, not only adds years to the sum of each individual human life, but gives a Jenner to the world, and secures life to thousands who would have lost it on the threshold of existence, and as yet unconscious of its sweets.

Could we imagine that the turmoil that has occurred, and the anxiety that has possessed the professional mind for the last few months, would lead to such a consummation as this, we should indeed think that all had been well endured.

The mode of effecting the union suggested we leave, as of easy application: almost the only point that the College would require would be that the licentiate gave up all external vulgar insignia of his calling, such as red lamps, &c., and put away every appearance of shop and trade; he, on his part, would stipulate for liberty to furnish his own patients with the medicines which he himself thought necessary. Twenty years would not go by till that occurred in London, and all the large towns of England, which has

already taken place in Edinburgh, Glasgow, &c., viz. that no professional man would keep medicines in his house, save for cases of emergency in the night, but would write his prescription, which would go to the chemist, who would be strictly prohibited from interfering with medical practice.

The plan suggested would have this farther advantage—it would not be opposed by those who have been prime movers in the construction of the Medical Bill. We threw it out to the distinguished individual who has the credit or discredit, according to different men's views, of the projected Bill, and his reply was: "Let the College of Physicians take them and welcome,"—meaning the general practitioners. The general practitioner ought never to have been separated from the College of Physicians: his being so at the time the Act of 1815 was passed, was a grave error. Had the College had this respectable body of men for its licentiates,—and it might have had them, would it only have yielded a single point that has virtually been conceded since,—and wishing to retain the class of Fellows, made the degree in medicine the simple ground of primary distinction, it might now have been powerful by its wealth, and influential by its libraries and museums, as it is only powerful in virtue of its good name, but helpless to further the art and science of medicine, by any of the great means and appliances to that end.

THE MEDICAL PROFESSION BILL, No. X.

ONE of the clauses which has been held among the most important in the proposed bill, is the 26th, which refers to the REGISTRATION of medical practitioners. This clause enacts, that no person who is not registered by the Council of Health and Education, shall

be appointed to any medical or surgical office in any hospital, prison, workhouse, &c., nor in her Majesty's Army or Navy, nor in the service of the Hon. East India Company (unless he be a native of India); and it gives the Council of Health and Education power from time to time to make regulations for specifying what institutions are to be considered public institutions within the meaning of the Act; and which form of testimonial shall be necessary to qualify the holder for every such situation.

No doubt appears to be entertained by the profession generally of the advantages of every part of this clause, except the last. It does not, however, secure much more than has been long sanctioned by usage: the governors of public institutions have insisted for many years, even on candidates for their medical offices having a legal qualification—a license from the Apothecaries' Society at least, frequently a diploma from a Royal College of Surgeons; and, with reference to physicians, a degree from some accredited University, and, in many cases, a license from the Royal College of Physicians in addition.—And then, as to the Army, it is quite certain that no man has been appointed in the medical department during the last half century and more, who had not had a diploma from the Royal College of Surgeons of London, Edinburgh, or Dublin. The Navy may have been more lax; but the present Physician-General has long discouraged applications for admission on the old certificate of competency to serve as surgeon's mate; and no man among assistants has for many years been promoted to a higher grade, who had not the diploma of surgeon from one of the Royal Colleges. The same rule has also, we believe, been long acted upon by the Board of Directors of the Hon. East

India Company. There would, nevertheless, be great advantage in a general list of registered, *i. e.* legally qualified medical men, published by authority. The Army and the Navy, and the Law, have their lists severally; and the time has certainly now come when we ought to have our MEDICAL LIST also. At more than one of the meetings of medical men held throughout the country, it has been noticed as a defect in the 26th clause, that the purposed registration is not imperative. We do not see, however, how anything having reference to the individual only can be made imperative in such a country as England, even as regards medical men, who certainly, whatever their other virtues,—and all our readers know that we estimate them very highly,—are still no Hampdens. We do not think it would do to compel them to register. They have motive enough in the 27th clause of the Bill alone.

The part of the clause that has naturally excited suspicion, is that which gives to the Council of Health and Education the power of specifying both the institutions that are to be considered public, and the title of the testimonial that is to qualify its holder to fill their medical offices. Suppose the Council of Health and Education to say that every paltry dispensary should be held a public institution, and that its medical officers should be associates of the College of Physicians, or Fellows of the College of Surgeons, it is obvious that there is nothing to prevent them from doing so, and thereby excluding the Licentiate in medicine and surgery from everything like public professional position. This is one of the insidious elements, as they have been characterized, of the bill; it is the drop of venom infused into the quart of wholesome drink; apt to be taken without suspicion, only to be discovered afterwards to be deadly.

The 27th clause enacts, that persons registered by the Council of Health as physicians, surgeons, or licentiates, shall be exempt, while practising as such, from being summoned on juries and inquests, and from being required to serve corporate, parochial, ward, hundred, and township offices; it farther declares, that the certificate of no unregistered person shall be received as the certificate of a medical or surgical practitioner in any court of law, or in any case in which such a certificate is required.

This clause cannot, we believe, be viewed as conferring any privilege that is not already accorded us, either by law or usage, which last, in England, is very commonly held of the force and avail of law. Still, as it confirms and makes statute-law of privileges that are absolutely indispensable to the existence of the practitioner of medicine, it must be viewed as right and proper. We rather think the medical profession have another privilege than any that is here accorded—that of being exempt from serving in the militia. But upon this point we are not quite certain; and were it as we rather think it is, the privilege is indefensible, and should be given up. All and sundry, gentle and simple, must be ready to serve as a militia-man, in case of danger or emergency to the country. Were the cry again to be: "*Pro aris et focis!*" we of the medical profession would surely never be found lagging in the rear.

Clause 28th provides for the registration of persons now practising. The Council are to have the power, during the next twelve months after the passing of the act, on application made, to register every person legally practising as physician, surgeon, or apothecary, on the production to the Council of his diploma, license, or certificate, or of such other proof as shall be satisfactory

to the Council. For persons abroad, the time of registration is extended to two years. Fellows or associates of any of the Royal Colleges of Physicians or Surgeons are to pay a fee of £2. on registering; in every other case the fee is to be five shillings. The fees are to be applied towards the expenses of the Act.

Now I am a member of the Royal College of Surgeons; I have practised as a surgeon for twenty years or more, prescribing for my patients, they having had my prescriptions made up at a chemist's—I have practised as a *pure* surgeon. But I have had no particular friend a member of the Council of the Royal College of Surgeons, and my name neither appears in the first nor second batch of Fellows, though there are men there who were my dressers or apprentices. What is to become of me? shall I be admitted to register as a surgeon—my grade, or must I descend to the licentiates? They are only Fellows of Royal Colleges who are provided for; he who is a pure surgeon, yet no fellow, is left out of consideration, and as a correspondent of last week said, may “take to the coal or wine trade,” unless he consents to eat humble pie, present himself for examination, pay another fee, and take his place at the bottom of the list.

In a number some time back, we made a grave mistake in regard to the amount of the registration fee for persons already engaged in practice. Clause 13th enacts definitively, and without reference to any ulterior proviso, that “a Register shall be kept and published from time to time of all persons who shall have been examined, and shall exhibit before the said Council letters testimonial of their qualification to practise as a physician, or as a surgeon, or as a licentiate in medicine and surgery; for which registry the Council shall be entitled to have from

the person requiring to be registered, a fee of £5, in the case of a physician or surgeon, and a fee of £2, in the case of a licentiate.” This, we now know, refers to those who may enter the profession subsequently to the passing of the Act; those who are already engaged in practice are to pay fees of £2, and five shillings.—From the returns of the occupations of all persons in these countries, it may be assumed that the number who would claim registration as medical practitioners may be about 20,000, of whom one-tenth, or 2,000, may practise as physicians or pure surgeons, and 18,000 as general practitioners. The sum levied on the physicians and surgeons would therefore amount to £4,000, that on the general practitioners to £4,500. This is not nearly so large a sum as we descended on formerly; and it is probably still too large. But, on the whole, it would probably not be going too far to say, that a fine of from £6,000 to £8,000 would be levied on the members of the medical profession domiciled in these countries, if this clause were suffered to stand unmodified, and the Bill became law.

We ask our brethren if their incomes are so large that they will suffer the minister to put his hand into their pockets, and take from them this amount without complaint? at the same time, be it observed, that they are told they are not fit to be trusted with a voice in the management of their own corporate affairs, though they may be good enough to spread a plaster and administer a clyster.

MOVEMENT IN THE PROFESSION.

THE Council of the Glasgow Medical Association have made what we cannot but regard as a very good report on the Medical Bill, and coming from gentlemen living under another state of things from ourselves, and unbiassed, *uninterested*, save in so far as they are

medical men, we beg to call the attention of all whom it may concern to this able document. It is too long for us to reprint, but the Hon. Secretary, Dr. Maclear, 12, George Street, Glasgow, we doubt not will forward it, at the cost of the postage, to any one who applies. The Glasgow Association we may say generally, approves of the institution of a Council of Health and Education, but would have no member of it appointed by any of the Royal Colleges; they would have nine members appointed by the Crown, and nine by all enregistered physicians, surgeons, and general practitioners: two by those of Scotland, three by those of Ireland, and four by those of England. The Glasgow Association say justly of the bill that:—

“Dividing the present Incorporated Practitioners into the two classes of Physicians and Surgeons, the Bill continues them in all their several corporations, as Universities and Colleges—selects them alone from the whole profession for supplying men to form nearly two-thirds of the Council—upholds and enhances their exclusive privileges in medical teaching and medical licensing; and, in fact, is so much occupied about them alone, as to be little else than a new code of rules for guiding them in the exercise of their privileges, and in their new relation to the Council. Maintaining the present division of medical men into Incorporated and Unincorporated Practitioners, and constituting the latter into a third and separate class, under the new name of Licentiates in Medicine and Surgery, the Bill not only does not admit these Licentiates into any of the class privileges of the Physicians and Surgeons, but does not convey to them any one privilege as a class: it just continues them what they now are, viz.—a mere crowd of individual citizens, who, in their profession, are devoid of legal government, of legal union, of political status, and of political privileges; and, despite of their numerous and repeated applications as Medical Reformers, and although they form nineteen-twentieths of the medical profession within the three kingdoms, it is truly for them a Non-Medical Reform Bill.”

The Council of the Glasgow Association would propose these amendments on the bill:—*first*, that all unqualified persons who shall practise any of the branches of the medical profession for *fee or reward*, should be liable to prosecution, by some public prosecutor, (or by some summary pro-

cess); *second*, that the constitution of the Council should be such as we have stated; and—

“*Third*, that all existing Unincorporated Practitioners be constituted into a new corporate body, under some such designation as “The Imperial Medical College;” that, after the passing of the Bill, all enregistered persons, not associates or fellows of the existing Colleges, nor Professors in the Universities, become members of this New College in virtue of their registration; that its offices and laws be in accordance with the free nature of its constitution, as well as with the general regulations of the Council; that all its members be co-equally electors for, and co-equally eligible to, its offices; that its members be recognisable as legal teachers of the medical sciences; and that, whether the licensing powers of the Apothecary Company be or be not transferred to it, it be a licensing body on a par with the licensing bodies mentioned in the Bill.”

In conclusion they say,—“Should the First Amendment be adopted, but not the two last, the Bill will be improved; but, as unincorporated practitioners, we shall be so little benefited by it, that we will be under the obligation of continuing to advocate and urge Medical Reform; should the Second be also adopted, but not the Third, the same obligation will lie upon us, although the constitution of the Council would be exceedingly liberalized. But should the Third be also adopted, Medical Reform would substantially be carried. And our conviction of this is the reason why we have said that the Bill, viewed as a code of rules for the incorporated bodies, is quite compatible with Medical Reform.”

The profession of York met at the Dispensary on the 26th inst., Dr. Goldie in the chair, and passed the usual resolutions of thankfulness to the minister for introducing a Bill, and for the opportunity afforded the profession of discussing the measure; approving the institution of a Council of Health and Education, but expressing an opinion “that the general practitioner should be fully represented in it;” that the body of general practitioners should take part in the examination of the practitioners of their own grade, and that for this purpose they should be incorporated in each division of the United Kingdom; that measures of easy application to prevent unqualified persons from practising are required, &c.

A meeting of the medical men of

Chichester and vicinity, was held at the Chichester Infirmary, on the 31st ultimo, and expressed satisfaction with the introduction of the Bill; with the maintenance of the existing distribution of the profession of medicine into physicians, surgeons, and general practitioners; they thought, however, that the constitution of the proposed Council of Health ought to be such as will represent each grade of the profession effectively; and that it would be highly detrimental to the public health, were all restrictions, as proposed by the bill, to be removed from the practice of medicine in each and all of its branches.

The practitioners of Bath met on the 5th instant, Mr. Norman in the chair, and passed resolutions generally favourable to the Bill. Mr. Soden made an excellent observation in proposing the first resolution (which was merely expressive of gratitude to the Government for having thought the profession worthy of legislative enactment), to the effect "that the proposed Council of Education and Health would have the power of materially improving the profession, if they would institute an examination of medical students preparatory to their registration as such, with a view of ascertaining whether they had received a good sound general education previous to the commencement of their professional studies." Alas! there is no provision for any thing half so advantageous to the profession, and the Council could never do anything nearly so likely to be beneficial.

The second resolution thought that the nomination of six members of the proposed Council of Health by the Government was too many, and that the proceedings of the Council ought to be open to registered practitioners at all reasonable times.

The third approved of the system of registration, and

The fourth deprecated the repeal of the Apothecaries' and all other Acts, without substituting some more enlarged measure of protection to the profession and the public.

The Bath practitioners appear to us to be in the same predicament as the Colchester folks; they approve of the Bill in their orations, and then quarrel with every one of its provisions, and with some of its essential principles, in their resolutions.

The practitioners of Manchester held a meeting, numerous attended, on the 6th instant, Dr. Bardsley, sen., in the chair. The first resolution was the same as that at the other meetings noticed in this day's Gazette, but expressing "surprise and regret" that, whilst all the protective enactments were swept away, no new and more efficient one had been substituted. The second resolution approved of a general Council, but not of one with the constitution of that which is proposed. The third resolution was expressly condemnatory of the proposition to remove all restriction on unqualified practitioners. A petition was agreed on in conformity with the views of the speakers, and the resolutions passed.

This meeting appears to have been conducted in the best taste and temper. Every one was listened to patiently; several amendments were proposed, calmly discussed, and disposed of. Altogether it was characterized by the good sense and love of fair play which we have ever admitted in our friends of Manchester.

THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

On Tuesday evening last the first meeting of this Society for the season was held at its house in Berners Street, Mr. Stanley in the chair. On assuming his seat the President took occasion to advert to the prospects of the Society, which he spoke of as flourishing. In point of entertainment the present promised to be as brilliant as the last, or any preceding session of the Society. He congratulated the Fellows on having met once more for the cultivation of good understanding, and for their mutual improvement.

Papers were communicated on a Disease of the Gall Bladder, by Dr. Roberts; on an Obstruction of the Vena Cava Ascendens, by Dr. Peacock, of Edinburgh; and on the Natural History, Anatomy, and Physiology, of the *Echinococcus Hominis*,—an abstract of which, with a report of the discussion that followed, will appear in our next.

DEARTH OF SUBJECTS FOR DISSECTION.

We are sorry to hear complaints from all quarters of the scarcity of bodies for the dissecting-room. At University

College and King's College they are all but at a stand-still through the deficiency. The destructive influences of idleness on the minds and morals of students cannot be estimated too highly. These young men are actually roaming about the streets, and appear to be getting into mischief because they cannot find occupation in the legitimate business of their studies. The Home Secretary must look to this state of affairs immediately.

INCORPORATION OF GENERAL PRACTITIONERS, AND THE MEDICAL BILL.

To the Editor of the Medical Gazette.

SIR,

I HAVE not yet seen two pamphlets addressed to the general practitioners, the one by the Society of Apothecaries, and the other by the practitioners of Marylebone, so that I am not aware what measures are most recently recommended for the adoption of that body in the present important crisis. Your next number will be in print before I can receive these publications, and I am unwilling to defer for another week a few remarks on the present position of the general practitioners, in relation to what I conceive that would be under Sir James Graham's Bill. Though I am a decided advocate for the Bill, amended and modified, as I trust it will be, and equally so for the repeal of the Apothecaries' Act, when that can be done with justice, I must confess that I think the position of the general practitioner under the bill as it at present stands will be worse, as regards material interests, than it is at present. But even as it at present stands, the bill is, I conceive, calculated to elevate the character and position of the profession as a whole. The entire tendency of the measure is to harmonize, unite, and consolidate the existing *membra disjecta* of the profession in the three kingdoms, and its most prominent defect consists in its failing to do this to a sufficient extent. In addition to these merits it possesses the pre-eminent one of placing the profession in an honourable position in relation to the state. The advantages, however, are only indirectly and remotely afforded to the general practitioner, but will, as the bill at present stands, be almost exclusively enjoyed by the physician and surgeon. Again, whilst in the case of the higher walks of the profession these are hardly likely to be affected by the working of the bill, the material interests of the general practitioner are but too likely to suffer. Positive protection under the Apothecaries' Act, or at least

the name and semblance of such, he will exchange for mere negative discouragement and registration.*

On the other hand, the licentiate in medicine and surgery will exchange the (in this country) obsolete, and (as applied to a practitioner of medicine) anomalous designation of apothecary, for one in every way more befitting him, and calculated to raise him in the estimation of the public. This is as it should be; but I can hardly avoid expressing the hope that, in connection with this, the Society of Apothecaries will voluntarily retire from all participation in the examination of future licentiates (a duty which though they have most ably performed should never have devolved upon them), and return to their original and really honourable position of a guild or municipal corporation. Justice, however, the interests of the general practitioner and of the community, and, I will add, the interests also, when viewed correctly, of the entire profession, all require that the body of general practitioners should be adequately represented in the Council of Health and Medical Education, and that they should likewise be brought into fitting and honourable relations with the Colleges of Physicians and Surgeons. Unless these two points, and direct protection in some shape, be gained, although I should still regard the bill as a boon not to be rejected, making, as it appears to me, so many steps in the right direction, a great amount of good will still fail to have been obtained. It will, I trust, be admitted, that all classes of the profession should unite in endeavouring to procure such alterations in the bill, as will, so far as is possible, ensure the dignity, order, and harmony of the profession, both as a whole, and in its several parts. Now as the profession is at present constituted, and as it is proposed, and I think rightly, that it should be constituted under this bill, I do not see how these objects are to be attained, without the licentiates in medicine and surgery, at least in England, (constituting, as in that part of the United Kingdom they do, a great third estate of the profession,) being at once formed into a Society, by a Royal Charter of Incorporation. This Society, or College, should, under the provisions of the bill, elect from two to four members of the Council of Health

* Chemists and druggists are the class against whom the public and profession will have most serious need of protection. All respectable pharmacists, however, are opposed to all medical practice, unless of the very simplest description at the counter. This can never be entirely suppressed. The Pharmaceutical Society will probably co-operate in endeavouring to procure a prohibitory clause against chemists and druggists acting as medical practitioners; this being contrary to the fundamental rules of the Society. If this were done, and the laws against mal-praxis by the unqualified made more stringent, all perhaps would be done that the state can effect.

and Medical Education; should either alone, or, as is more in unison with the provisions of the present bill, (and as I think is to be preferred,) in co-operation with the Colleges of Physicians and Surgeons, conduct the examination of the Licentiates in Medicine and Surgery; and should frame bye-laws for maintaining the orderly and honourable practice of the profession, by its members, both in their relations to the public, to each other, and to the other grades of the profession. These bye-laws, like those of the Colleges of Physicians and Surgeons, should be subject to the approval of the Council of Health and Medical Education.

Without going further into details, I will briefly add, that I should rejoice to see the metropolitan and provincial general practitioners, supported by their brother practitioners of the higher grades, (for I suppose we must retain the name,) at once, and with one voice, memorializing the Queen, through Sir Graham, for the grant of a Charter of Incorporation. When that which was so recently granted to the Pharmaceutical Society is remembered, a charter can hardly with any shew of reason, or of justice, be refused to so important and generally meritorious a body as the general practitioners. Let them only ask for what is just and reasonable; let them but submit to have the foundation of their edifice laid one step lower than those of the Colleges of Physicians and Surgeons, and not aim at exact equality with these bodies, and I cannot see why the latter should oppose, or rather, why they should not promote, so expedient, and, as I would submit, so just a measure, as the incorporation of the general practitioners.

In conclusion, I would express a hope that at the ensuing meeting at Derby, the interests of the profession as a whole may be fully, cautiously, and dispassionately considered; and then we can hardly doubt that great good will result from the meeting.—Allow me, sir, to subscribe myself,

MEDICUS.

November, 1844.

THE MARYLEBONE MANIFESTO.

To the Editor of the Medical Gazette.

SIR,

I AM certain, from my personal knowledge of many of the members of the Marylebone Association, that you have rightly interpreted their feelings in your last week's commentary on the "Manifesto" just issued. This document is perhaps the most important that has met the public eye since Sir Graham's Bill was introduced into Parliament; so, at least, it appears to me, and

so it is evidently regarded by you. Many of the names attached to it are those of gentlemen past the meridian of life, whose fortunes may be said to be made, and who cannot be reached by the imputation of motives of pecuniary gain, or selfish ambition. And these are the individuals, who, if report speak truly, are the most zealous in this new movement. What, then, but a sense of obligation to fulfil a public duty, has dictated the course they have taken? The Marylebone Manifesto gives a clear insight into the deep interest which the people of these realms have in the laws affecting the general practice of medicine. It very properly treats the question affecting medical distinctions as of subordinate importance. Although its clauses apply to the "Medical Reform Bill" more especially, yet its arguments derive their origin from the conduct of the Council of Surgeons. It is the Council that has attempted to establish a parchment distinction between "Pure Surgeons," and "Surgeon," in the civic sense of the word.

The Marylebone Association have placed the absurdity of this in broad relief, without denying the justice and propriety of awarding surgical pre-eminence to those who really deserve it.

I doubt not, Mr. Editor, that if the College could be brought to comprehend the great mistake it has made, and to consent that its new charter should "live a day and die," it would be easy to procure a substitute, and, if conceived in a just and liberal spirit, its principles being carried out fairly, that the Association of Marylebone would appease its "anger," and a modified Reform Bill might not only be introduced into, but carried successfully and satisfactorily to nearly every party, through Parliament.

Meanwhile, your Marylebone friends must be kept up to their duty. They must promulgate their "Manifesto" in all directions. It is too strong a document to be disregarded in any quarter. "It is the truth." Let them also enrol the General Practitioners, and then, as long as they confine their objects to the *public good*—which is *the good of the profession*—they will find themselves in possession of a power irresistible against evil.

There is one point in which I presume to differ from you. I do not believe the establishment of "a College of General Practitioners" an Utopian project. On the contrary, however it may be brought about, I believe it is that which must come. What is "pure surgery?" How many men could get their living in the metropolis, even with a population of two millions, by "pure surgery?" Let any thinking man attempt a reply to these questions, and he will most assuredly arrive at the conclusion, that sur-

gery, without a knowledge of the practice of physic, is a farce, and that a College of General Practitioners of Medicine and Surgery would be fifty-fold more important to the country, than any Royal College of the "purest" Surgeons.

If it be so in fact, let the Council persist in its present course, and I am much mistaken if we shall not see something rather practical than Utopian in the project of the Marylebone Association.

AN OLD ADMIRER.

[Our friend must have mistaken us. We surely did not treat the project as Utopian. We even went so far as to say that if nothing which we thought better could be done, that then a College of General Practitioners would probably be the best project that could be adopted.—ED. GAZ.]

UNQUALIFIED ASSISTANTS AND MEDICAL PLURALITIES.

To the Editor of the Medical Gazette.

SIR,

As medical reform is at present so prominently before the profession, and seems in a fair way of receiving that attention from government and the legislature which it so much needs and merits, we may well hope that ere long "the jurisprudence of medicine" will be with us, as it has long been with our Continental neighbours, settled on grounds more or less sound and equitable. In anticipation of such adjustment, it is well for every one to call attention to whatever he may think amiss, and to suggest any remedy that may occur to him; it remains only for the majority to adopt or reject his views. The two abuses that I now wish to urge upon the notice of all, have hitherto passed—the one nearly, and the other altogether—unnoticed, so far as I have observed, in our various meetings and written effusions. The first has been briefly, but pointedly, referred to by Mr. Carter (now of Hadley) the ex-secretary of the North of England Association, in a most able review of the proposed measure of Sir J. Graham, addressed in the form of a letter to his successor in office, Dr. Charlton, and which the Association has printed for circulation, as it so fairly represents the opinions generally held throughout this district on the subjects treated of. The abuse alluded to is the too frequent practice—in some cases the cool determination—of duly qualified practitioners to employ *unqualified assistants* (often mere lads, who have undergone no system of training whatever) to visit and prescribe for such of their patients as they themselves either could not find time, or

had no inclination, personally to attend to—generally, or always, the poorer portion. Such a proceeding surely calls loudly for prevention; and what was, at all events, partially guarded against by "the Act of 1815," it ill becomes us not to notice the omission of in Sir James Graham's proposed bill. A check should surely be put on him who would, either from a too great desire of gain, or from, if possible, a still more detestable feeling of jealousy, seek, in this most grovelling way, to overtake more practice than one man can accomplish. To such an extent, indeed, has this abomination prevailed, that a duly qualified man finds it difficult, or even impossible, to effect an engagement wherever unqualified youths are in the field. Bad enough, in all conscience, would be the case if the reason for such a state of things were the difference of remuneration required by such ill-matured opponents! How much worse, then, is it, when we learn the reason, as it is unblushingly given us by some, to be the risk that otherwise they would run of being supplanted? A pretty reason, truly, when interests so vital are at stake! An increased chance of gain is naturally attended by a proportionate hazard of losing; it is the justly inseparable accompaniment of speculation: and he who would honourably endeavour to extend his practice beyond what any personal exertions of his own could accomplish by employing a *duly qualified* assistant, must of course make up his mind to the possibility of such a one becoming, at some future day, either his rival or his junior partner.

In a profession where ignorance is crime, where culpable inactivity, or alas, more frequently, unskillful meddling, may so readily, and in a few short minutes, effect heart-rending separations, and blast the fondest hopes, how reprehensible does such conduct appear! In even a professional point of view, how dishonourable, not merely thus to retard, for a paltry gain, the onward progress of more honourable rivals, but to shut out the praiseworthy holder of a diploma, at his very outset in life, from the legitimate exercise of his talents; but how infinitely more so, how unscrupulous and heartlessly selfish, does such a mode of "doing business" appear, when, by its adoption, we see the best interests of the public deliberately trifled with, and a wholesale traffic in human life established! Well may such men sneer at and avoid our reform associations, while thus they are engaged, in our larger towns, in the systematic training of a race of impostors more dishonest and more dangerous than quacks for the rural districts.

The second point to which I would now call attention is one of much less magnitude,

but highly deserving of notice nevertheless. How evident to every one is, or was, the evil of pluralities in the Church! And why should *medical monopolies*, or pluralities, be differently regarded? In a large provincial town, for instance, boasting of an infirmary, a fever-hospital, a dispensary, and having two or three of the latter in its immediate proximity, in fact in its environs, why should so many institutions, each requiring and possessing so many physicians, be monopolized by the same number of men—nearly the same “*corps diplomatique*” in each and all of them—when *each individual charity* could readily have its *own medical staff*? The “love of place and power” must indeed be great when thus it extends to services at best but indirectly required. Is it not enough for a man that he gain his own ends? Must he needs obstruct the path of others? Is it not sufficient that he has had the use of the ladder wherewith to climb the precipitous ascent? Must he also, for prudence sake, draw the ladder up after him? Can so many offices be as efficiently filled by one man as by a corresponding number of men? In fine, are the interests of the public and of medical science not manifestly disregarded, ay, trampled under foot, for the furtherance of selfish ends, by the adoption of so unreasonable a *system*? And if so, should the public and the profession not seek to have a veto put upon it? Truly the instructive fable of “the dog in the manger” might here be aptly enough quoted as a finale. But enough, it is hoped, has already been said to secure the attention of medical reformers to two so important yet neglected subjects as those of “unqualified assistants” and “medical pluralists,” by

Yours respectfully,

A MEMBER OF THE NORTH OF ENGLAND
ASSOCIATION.

October, 1844.

NECROSIS OF THE SCAPULA.

A LABOURER, 28 years of age, had for some time observed a swelling upon one of his shoulder-blades, which increased gradually until, in the course of from six to seven months, it had gained the size of the two fists. When he came under treatment, the cellular substance and muscles lying over the scapula had sloughed, and the scapula in its upper half was found dead. A very copious suppuration was established. Pieces of the bone were thrown off from time to time by the powers of nature, or taken away by art. By and by the only part of the scapula that remained was its lower margin, and its articular or glenoid process; the superior part, with the spine, the acromion

process, and the coracoid process, were gone. The wound now began to heal, and the patient gradually recovered. The motions of the arm were much less restricted than might have been imagined from the extensive loss of bone and muscle that had been suffered. The clavicle, detached from its connections, at its outer extremity rose and projected for a time; but the skin over its point remained healthy, and by and by, in the course of the cicatrization, it was drawn down again, very nearly into its old situation.—Dr. LAMBRECHT, *Medicinische Zeitung*, No. 14, 1844.

AMAUROSIS OCCURRING SUDDENLY.

A MILITARY man, 48 years of age, had been long accustomed to take a course of mineral waters during the summer, on account of habitual hemorrhoids, with which congestion to the head, giddiness, sparks before the eyes, and some imperfection of vision, were associated. In the summer of 1841 the patient was hindered from pursuing his usual practice, partly through business, partly through an attack of rheumatic fever, scarcely recovered from which he had to join his regiment on duty. Here all his old complaints returned; and one morning on parade his sight suddenly became so imperfect, that he could not distinguish either objects or persons at a very short distance from him, and could neither read a printed page nor writing. As this attack was referred to hemorrhoidal congestion, leeches were applied to the sacrum, a large issue was made in the left arm, and the use of one of the purgative mineral waters, to which he had been accustomed, was commenced. To the mineral water was added by and by the use of cream of tartar and sulphur. The patient had so far recovered in the course of four weeks, that he was again in a condition to read rather small print.—Dr. SUFFERT, *Medicinische Zeitung*, No. 12, 1844.

APOTHECARIES' HALL.

Gentlemen who have obtained Certificates,
Nov. 7.—G. Yates, Birmingham.—J. D. Geldard, Worthing.—E. Bishop, Heckmondwike, near Leeds.

NOTICE.—If our correspondent *gamma* will call at our Printers' on Tuesday, he will find a packet for him.

ERRATUM.—In Mr. Ure's paper in our last number, at the tenth line from the foot of page 190, for “circulation,” read “articulation.”

WILSON & GILLIVY, 57, Skinner Street, London.

THE LONDON MEDICAL GAZETTE,

BEING A
WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

FRIDAY, NOVEMBER 22, 1844.

LECTURES ON THE NATURE AND TREATMENT OF DEFORMITIES,

*Delivered at the Bloomsbury Square
Institution.*

By R. W. TAMPLIN, F.R.C.S.E.
Surgeon to the Institution.

I HAVE now pointed out the leading deformities of the ankle-joint, but before I conclude this subject, I must draw your attention to a condition of the joint I have met with, which exists without any visible deformity, but which, nevertheless, is as serious an inconvenience to the patient as some already detailed, namely, a fixed position of the ankle-joint at right angles, occasioned by a contraction or rigidity of the whole of the muscles whose tendons surround the joint; the joint, as far as motion is concerned, appearing ankylosed. It arises from inflammation in, or in the neighbourhood of, the joint, and, as in other instances already mentioned, owes its origin to the instinctive efforts constantly in exercise by the patient to relieve himself from, or to prevent an increase of, pain; there being no disease in the nerves or muscles themselves. The position at right angles is, however, the most rare, as, generally, when disease in or about the joint is a cause of contraction, talipes equinus, or talipes equino-varus, is the result; either of these deformities appears to leave, and in fact does leave, the synovial membrane of the joint more free, and less subjected to pressure, than the position at right angles. This condition, then, although unaccompanied with deformity, is, as you must perceive, a very serious inconvenience, and occasions great lameness; as, during the act of progression, immediately the opposite extremity is carried beyond the perpendicular position of the body the patient

is thrown on the anterior extremity of the metatarsal bones, and the body becomes raised beyond the natural extent; and again, in bringing the foot thus affected forwards, the heel only touches the ground at first, and the sole of the foot falls more or less abruptly, according to the rapidity with which the patient walks. The consequence is, that constant lameness, and consequent fatigue, always result, and occasionally the foundation is laid for lateral curvature of the spine, from the increased mobility kept up in the spinal column.

A case of a gentleman, 20 years of age, occurred to me some time since. He consulted me for what he imagined to be simple contraction of the gastrocnemius, and also for lateral curvature of the spine, which, however, was slight. Upon examination, I found that it was impossible to flex the foot beyond a right angle, and recommended division of the tendon; which was assented to. I accordingly divided the tendon, and proceeded in the usual manner to flex the joint. As the flexion proceeded, the foot everted (a circumstance I pointed out to you, when speaking of talipes equinus, occasionally happened), and, upon examination, the peronei and common extensor were exceedingly rigid and tense, as also the anterior tibial tendon. I proposed and advised a division of these tendons, which was assented to. After the punctures had healed, I directed the foot should be flexed and extended alternately night and morning, and in this way succeeded in obtaining free motion, which was also accompanied with voluntary power; and the patient perfectly recovered without the aid of artificial support. The curvature of the spine was afterwards cured by means I shall have occasion to point out to you when we come to speak on that subject.

This case originated when the patient was six years old, from abscesses around the joint, but which had not affected the integrity of the joint itself, and was occasioned by the constantly maintained position, every muscle

having been directed to assist in preventing motion: and this being continued for two or three years, resulted in the condition mentioned. I have since seen three cases in younger subjects, but it is rare, and will require great caution in forming your diagnosis.

With this, gentlemen, I conclude the deformities of the feet: and you cannot have failed to observe, that each of them is, at its origin, and in its less severe form, nothing more than a permanent position of one of the natural motions of the joint, whether it is congenital or non-congenital, whether attended with paralysis or without paralysis; and this circumstance alone renders it the more unaccountable and astonishing that the attention of the profession was not earlier attracted to their true character, and that the circumstances which induced Delpech to make this great and novel experiment of remedying them upon proper scientific principles, namely, the union of the tendo-Achilles and fracture of the patella, were unobserved until so recent a period, for many opportunities must have presented themselves in the dissecting-room for the study of their morbid anatomy.

In the first deformity I drew your attention to, namely, talipes equinus, there is at its onset, and during its progress, nothing more than a greater or less extension of the joint, and this amount of extension not exceeding the natural and healthy position, which, during the varied exercise to which every human being is subjected, is constantly taking place; and even the complete elevation of the heel can also be effected voluntarily, as may be seen on the boards of the Opera, for no talipes equinus can be more complete than the extreme extension the opera-dancers are enabled to effect, and for some length of time.

In talipes varus, the next considered, there is in its simplest form but the inverted position, which can be accomplished at will by any individual; and the malposition of the bones, in severe adult cases, with the contraction of tissues, is occasioned, as I have shewn you, by the weight of the body constantly stretching certain ligaments, and in this manner adding to the original position, by more or less separating the bones from their normal articulating surfaces—at least in part, never altogether; and it is a remarkable fact, that in this, the most severe deformity in appearance, and occurring perhaps at an early period of uterine existence, the bones are forced and grow in their natural relative proportions, and with their natural healthy articulating surfaces; although, with a natural inference, a portion of those articulating surfaces have never been in actual contact; thus shewing that the *nus formativus* remains uninter-

rupted, and giving us a clue to its real character and origin.

Again, in talipes valgus, you have also the eversion which is to be accomplished by the will at pleasure. The flattening of the arches of the foot, arising also from mechanical causes and a supposed debility of the passive attachment of the bones, and the two deformities arising from the first, in combination with either of those last mentioned, can be at all times occasioned by the effort of the will.

The last, viz. talipes calcaneus, being also a flexed position, and one constantly occurring in the varied motions exercised in daily life; and yet this state of things being permanent, becomes a deformity, of course aggravated from various attendant circumstances and causes mentioned. And what deformity can we meet with greater than that which is daily witnessed in the positions assumed by itinerant mountebanks, who have been accustomed from early infancy to a stretching of almost every ligament of the body.

Having now pointed out to you the true character of the deformities of the foot, I must just draw your attention to the congenital deformities. These consist of talipes varus, talipes valgus, and talipes calcaneus. I have never met with talipes equinus. You will recollect I stated that, in my opinion, it was position, and position alone, which caused these malpositions (or rather the permanent extreme natural position, for this is its real character) during uterine existence; and if you observe the character of these three congenital deformities, I think you will have little difficulty in reconciling the possibility, if not the probability, of this being the case. Take the first mentioned, talipes varus: there are many positions in which the extremities of the child may be kept in utero, which would adapt it better to the cavity of the uterus, provided the feet were inverted; and it so happens that by far the greater number of congenital cases consist of double varus; and where it does not consist of double varus, nothing is more easy to account for than one or other extremity being so placed, that the foot should grow in that position, whilst its fellow may be free and unconfined. Then, if you refer to congenital valgus, this also may be easily imagined—that the extremities or extremity may be so situated that the flat surface of the feet press more or less on the walls of the uterus; if not constantly, sufficiently to influence the position of them during the growth of the bones and ligaments; and, be it remembered, that it is only the ligaments and muscles that we find affected, the bones retaining, in either of the three forms, their natural proportions and relative size, and it must be evident that it would not require

any force, but merely a constant position, to produce this effect,—at least it is so to my mind.

Then, again, take talipes calcaneus: this also is a position that may as easily be imagined to be constantly effected, according to the position in which the extremities lie; and if they are so situated that the anterior portion of the sole of the foot presses more or less on the walls of the uterus, of course the flexed position is the one it would assume, and that without any difficulty or resistance; as, if we suppose during the motions of the child, the position of the feet may be more or less altered as it regards the extreme amount of flexion, yet if, after these active efforts have ceased, the feet reassume this position, the gastrocnemius remaining passive, which it would do, of course the greatest amount of flexion would most easily take place, and thus become permanent, the flexors growing in the contracted condition.

The same remarks apply to each of the congenital deformities which we meet with, without malformation of the parts. I stated also to you that it was my opinion no structural shortening took place, and that there was no evidence of any morbid condition of the muscle or muscles. Now it must be remembered, that although the bones grow in an extreme position, yet, as I have before observed, they are perfectly formed, and that the articular surfaces also are in every respect perfect: so that thus far a malposition does not interfere with the *nisus formativus*. Why should it do so in the muscles or tendons? To me, the fact of the contraction of the *ciatrix* drawing together the two ends of the tendons, in the case I mentioned to you in my first lecture. The natural position of the foot being maintained, and the natural motion of the joint having been exercised by the little patient, previous to its death, is conclusive as it regards the idea of structural shortening. What evidence have we, then, of a spasmodic condition of the muscles contracted? Do they, during the exercise of volition, whether in infants or adults, present that peculiar irregular action which is so conspicuous, and, I may say, characteristic, of what we call spasm? Certainly not. The motions are as well and regularly performed in the malposition as in the natural position, so far as the contracted muscles will admit. And many cases may be seen amongst our out-patients, in whom the deformity has been removed, where the little patients exercise every motion of the foot as perfectly and with as much facility as a child who has not thus suffered. This could not be if there was that state of muscle called spasmodic, as in these cases (of a congenital spasmodic affection), of which we have had several, we know of no remedy that has success-

fully been applied; so that it does not appear there is any want of development, any diseased condition of the brain or nerves, nor any unhealthy condition of the functions of the muscles, unless the simple contraction be regarded as such. Now you must also bear in mind that the muscles which are not contracted are not in any way affected beyond their being kept constantly drawn out, and from the position of the feet or foot being constant, also prevented from contracting on themselves; but the moment the resistance is overcome you will find their power of contracting as perfect, whether in infants or adults, but more evidently in infants, as if their full amount of power had constantly been used. And you have only to walk up stairs, and you will be enabled to satisfy yourselves of this fact. So that these circumstances—I may say facts—combined, lead me to the conclusion that it is to the position that these deformities owe their origin. I have never, as I have told you, met talipes equinus congenital; I mean the simple elevation of the heel: this also confirms me in my opinion, as I cannot imagine how this deformity could be caused by position, for I can perceive no way in which the extremities of a child could be placed or formed in utero so as to keep the heel up, without any other deformity or malposition being produced. Whereas the three deformities mentioned may each of them be assumed to be placed easily in the position in which we find them.

With regard to the non-congenital deformities of the feet, you have, as I have had occasion frequently to observe, paralysis of one or more muscles, and a spasmodic affection of one or more of them; occasionally of the whole voluntary muscular system. When it is combined with paralysis, I have also stated that no known remedy has been discovered if it has been of long standing, and that we can only remove the deformity, and rest satisfied with artificial support. That the limb is always in an atrophied condition, and possesses that lifeless flabby state which is so peculiar to the paralytic condition, and as we know but little of the pathology of the nerves, I shall not waste either your time or my own by speculation or theory. Suffice it to say, that paralysis exists, and occasionally of both lower extremities, with contraction of one or more muscles, producing either of the deformities before mentioned; frequently varus of one foot, valgus, or equino valgus, of the other; the patient possessing the smallest possible amount of motion in the toes. And of course, if complete paralysis exists, you have no contraction of the knees, the limb lying in any position in which it may be placed, and appearing more like a foreign body than the living extremity, and, with the exception of the ligaments by which it is alone held, perfectly

passive; if not complete, the knees also will be found contracted, although there may be no available motion. You will occasionally find slight motion in one or other of the extensors of the leg, but not sufficient to be of the slightest use. There is always, however, as far as my present experience goes, more or less available power in the flexors and extensors of the thigh, and from this fortunate circumstance you will be enabled, after you have removed the deformity or contraction of the feet, to place the patient in a much better condition—I may say happier condition—compared to that which he has been previously obliged to endure.

About twelve months since, a patient from the country called upon me, and with great difficulty swung himself along between two crutches: his lower extremities being contracted and paralysed were perfectly

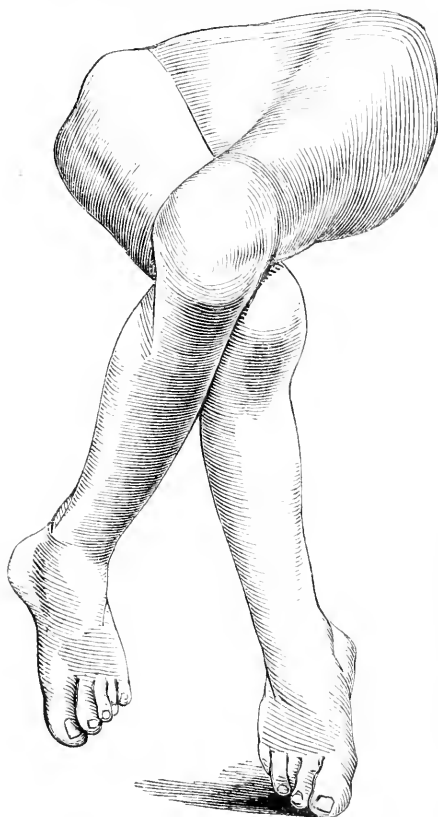


Diagram illustrating the paralytic condition of both lower extremities, which occurred in infancy from dentition. The flexors of the knees and gastrocnemii were contracted, the extensors of the knees and flexors of the feet perfectly paralysed.

useless; in fact, he could not move from the chair without assistance to raise him on his crutches. I divided the contracted muscles, and placed his feet and knees in their normal position; when, with upright supports attached to his boots, with stop-joints at the knee, he could rise from his chair, and, with the assistance of two sticks, walk; this he was enabled to do from the voluntary power he possessed in the flexors and extensors of the thighs. Since his return home he has been enabled to walk in this way about his farm, to superintend his business, whereas previously he was a complete prisoner, presenting a most miserable and pitiable appearance. The cast before you will illustrate the foregoing case most clearly.

In the case from which the cast was taken, the boy had never left his home or room except by being carried. On removing the contraction, and restoring the natural position, he also by the same means is enabled to take daily exercise with the assistance of two sticks; so that you can confer an immense amount of benefit in these apparently hopeless cases. Of course, as the deformities will consist of one or other of those I have endeavoured to explain to you, the treatment will be the same as that which is consistent with the nature of the case, and the peculiar form it may assume.

The spasmodic contractions are the most painful and difficult to treat, for although the deformity and contraction may be removed, yet we have hitherto been, and are at present, ignorant of any means of remedying the spasmodic condition of the muscles; and although by division of the tendons, and during the time the uniting medium is soft and yielding, you can easily hold the foot in any position, yet the cause exists, and the patient is unable to control his muscles. As soon as the uniting medium becomes consolidated, the same irregular action is brought into operation, and support the limb by any method you may please to adopt, you cannot remove the cause or the effect. You will, however, even here, improve the condition of the limb with great care; but I would never advise recourse being had to the operation if the foot or other articulation can be brought into position by the efforts of the hand alone; but if by such continued efforts you are unable to restore the natural position of the foot, then divide the muscles, which, notwithstanding their spasmodic state, are contracted; and after the removal of the contraction, support the limb, and keep it as much as possible in a fixed position. I know of no cases that are more troublesome than these. It is a curious fact, that in these cases, where every muscle is affected, those of speech and deglutition as well, the intellects are perfect, although apparently weak, as

the cause must exist in the brain or its membranes, as well as in the spinal cord itself. The involuntary muscles are not in the slightest degree affected. The cause assigned, as in most other non-congenital cases, is generally dentition or cerebral irritation, and you will frequently find talipes valgus of the one foot, varus of the other; never, however, in their more severe forms, as the opponent muscles, although possessing less power, and thereby admitting of the malposition, are also in an active spasmodic state, and prevent the foot assuming the more severe malposition. This deformity is said to be congenital. I have never seen a case in an infant, and although the parents assert that such is the case, I shall not be satisfied until I see it, as I think it most improbable, except in hydrocephalic congenital states; but even here I have not yet seen it. In the paralytic also you will find one foot affected with talipes varus, the other with valgus, or calcaneo valgus; in fact, in either of the deformities I have mentioned, you will, in the spasmodic cases, which affect the whole of the muscles of the body, find contraction, either permanent or temporary, of the knees, and if not permanent, they will invariably be found on the flexed position on any attempt to exercise them on the part of the patient. The thighs will also be found adducted, and occasionally more or less contracted, in the flexed position; the pronators and flexors of the hand and arm preponderating in power, so that the patient can exercise no steady well-directed movement, nor even continue the position in which the hand or leg may happen to be placed; as, for instance, in the attempt to hold any thing in the hand, after having grasped the object, the hand will suddenly open with an irresistible impulse; nor has the patient any power to prevent this occurring.

It is clear, therefore, gentlemen, that we are in total ignorance of any complete and successful remedy for these cases; it is therefore useless to enter more into detail, as any thing that could be further advanced would be mere speculative theory. Galvanism has, in some cases of the less severe kind, been attended with partial success; but I much doubt if any positive beneficial results have eventually been obtained. You can, therefore, only place the joints in the relative position, and keep them in that position constantly, if the feelings of the patient will admit of it, but occasionally, from the violent spasmodic action of the muscles, you will find it necessary to intermit the treatment.

CONTRIBUTIONS
TO THE
PATHOLOGY OF THE BRAIN.

By S. SOLLÝ, ESQ., F.R.S.
Senior Assistant-Surgeon to St. Thomas's
Hospital, &c.

To the Editor of the Medical Gazette.

SIR,

I SHALL feel obliged by your inserting the following pathological facts, which I have had the opportunity of observing and recording through the kindness of my friends Dr. Conolly, and Dr. Begley, of Hanwell.—I am, sir,

Your obedient servant,

S. SOLLÝ.

St. Helen's Place, Nov. 1844.

The accounts which we have of the post-mortem examinations of the brains of idiots are not on the whole satisfactory, and it has not unfrequently happened that no morbid appearance could be discovered.

The record of them is useful; and though my views regarding the relation which in this case they bear to the mental condition of the patient during life may not be admitted by all, I trust they will induce others to pay particular attention to the condition of all the commissures, in their pathological examinations.

His general characteristics are thus detailed by Sir Alexander Morison, in his admirable work entitled the "Physiognomy of Mental Diseases," p. 221, accompanied by a most striking sketch of the appearance of the poor fellow during life.

This idiot is four feet six inches in height; his head does not differ much in size from the head of a sane person; it is rather depressed in the frontal portion.

The measurement of the head is—
 The circumference . . . 21 $\frac{5}{8}$ inches
 Occipital frontal curve . . 12 $\frac{1}{2}$ "
 Longitudinal diameter . . 7 $\frac{3}{4}$ "
 Transverse diameter . . 5 $\frac{1}{2}$ "

His lips are thick and his mouth is gaping, allowing the saliva to drop out of it; his teeth are good, but very irregular; his gait is awkward and unsteady; in walking he stoops forward, his knees a little bent, and his arms hanging before him as if he were about to fall; his usual position is that of leaning against a door and gently beating his head upon it.

He appears to possess the external senses—that of feeling is very obtuse; he cannot say any more than *tee teet*, which he frequently repeats, particularly in bed; he sleeps little; his temper is good; he is inclined to laugh, but in a very discordant manner; he can feed himself, but cannot dress or undress; he is inattentive to the calls of nature; he does not exhibit affection for any one, appears to have no sense of shame, and music does not excite any emotion in him. He is said to be inclined to onanism.

From Dr. Begley I received the following:—

Case of the Idiot Daniells.

“James Daniells (called George Daniells in the certificate) aged 33, single. His mother states that when she was eighteen years of age, and pregnant of the patient (her first child), she in walking through a street in Spitalfields, accidentally trod upon a rat which ran across the foot-path from under an old watchman's box: the animal on being trodden upon turned round and bit the heel of the narrator, who was much frightened, and swooned away, and in about a week afterwards was delivered of the patient, a seven months' child: the boy was fully formed and very healthy, and continued to be so till he was three years old: at that age he was seized with ‘convulsive fits,’ which lasted seven hours: on these subsiding he was found to have lost the use of his limbs, he could not walk nor stand, and his head fell to one side on his shoulders; he could not articulate; whereas, before this attack, he used to run about the house and talk like other children of that age; he used even to go to a neighbour's for sand, tape, a bellows, or any thing else that his mother might have sent him to borrow: he used to call ‘dada’ when he saw his father, and he addressed other persons by their proper names; but after this attack he appeared to lose all intelligence.

“She stated distinctly that they were not connected with dentition.

“Medical aid was resorted to without benefit: he became an out-patient of St. Thomas's Hospital under Dr. Currie: electricity was employed: the convulsions frequently returned, the narrator thinks most severely at the new moon; he was sent to school, but could not be

taught anything, and was very mischievous; he was kept at home until about 14 years ago, when he became so troublesome it was not possible to manage him; he was then sent to a private asylum, and some time afterwards to this institution. Narrator has had six other children, all of whom are sane and healthy.

“W. BEGLEY.

“Hanwell, Oct. 1844.”

Autopsy 30 hours after death.

The anterior portion of the skull-cap very much thickened, at least twice its natural thickness. The external surface of the dura mater more vascular than normal for the age of the patient. Slight sanguineous effusion diffused in small spots and patches on the arachnoidea reflexa lining the surface of the dura mater, not confined to the upper part, but extending to the base of the brain. This could be scraped off.

Some serous effusion underneath the arachnoidea investiens. I collected four ounces of sanguineo-serous fluid altogether, but a portion of this was from the ventricles. The anterior lobes of the brain rather smaller than usual; the convolutions generally small and narrow. The medullary substance of the brain rather vascular; hemispherical ganglion of natural colour. The *neurine* of the septum lucidum was entirely absent, and only the lining membrane of the ventricles left; so that all those longitudinal fibres of the fornix which run through and from that septum were deficient. Central portion of the fornix soft; the crura cerebri and both the thalami were also softened, but not discoloured.

Weight of cerebellum and medulla oblongata, six ounces two drachms.

Cerebrum, lb. ij. ʒij. ʒij.

Inflammation of both lungs,—of the pleura on the left side, with purulent effusion.

Slight inflammation of peritoneum.

REMARKS.—In considering the deductions we can legitimately draw from these post-mortem appearances, we must separate those which are recent from those which are of long standing, as the latter alone could have been the cause of the idiocy.

First, the thickness of the skull is common in all cases of atrophy of the brain from disease; the growth of the

skull following the shrinking of the brain. The hemispherical ganglion, which is now admitted to be that portion of the brain which more directly ministers to intellect than any other, was not altered in structure, which would have been the case if the skull had grown into, and thus pressed upon the brain; so that this condition of the skull must be regarded as the consequence, not the cause, of the condition of the brain which produced this idiotic state of mind.

The anterior lobes of the hemispherical ganglion, though small, were not so deficient as to account for idiocy, and the substance of the ganglion was healthy and natural.

The softening of the fornix and thalami was asthenic, and very possibly not very recent in its production: so that it appears that the only abnormal appearance which we can suppose to have been co-existent with the idiotic condition of the boy, is the deficiency of the medullary fibres of the septum lucidum. To those physiologists who regard this portion of the brain as a mere septum, this fact is of little interest; but to those who agree with me in regarding it as an important portion of the commissural apparatus of the hemispherical ganglion, the fact will be interesting. I find it necessary to advert to the fact that I demonstrated in my work on the Brain. (See page 186, and plate IX. fig. 1. and page 428, for physiological inferences, for pathological states), that the septum lucidum consists of longitudinal fibres, which, running backwards from the anterior portion of the hemispherical ganglion, form a portion of the inferior longitudinal commissure or fornix, for most writers on this subject since have neglected to observe it. And though physiologists may disagree with me in my view of the office of the septum lucidum as a portion of the intellectual apparatus, I know that they will find, if they take the trouble to examine it, that I am correct in my account of its anatomical structure and the direction of its component fibres.

I have long regarded, and taught in my lectures, that the commissures are the instruments by which impressions are conveyed between one portion of the hemispherical ganglion and another, just as the nerves are the instruments by which impressions are conveyed

from the external world to the brain. If a portion of the commissural apparatus be deficient, then, I believe, is the individual in whom the deficiency exists deprived of the means of comparing the impressions which his organs of sense convey to his brain; and consequently becomes idiotic from this serious defect in his mental apparatus.

It is very difficult to reason with any satisfaction upon the account of the progress of the idiotic condition of this lad from the mother's state, in relation of the condition of the brain after death. But the explanation which I should venture to propose is this. That about the age of three, the convulsive fits which occurred were occasioned by slight inflammation of the lining membrane of the ventricles, and some serous effusion into these cavities, and that absorption of the septum lucidum followed the subsidence of the attack.

It may be said that the idiocy was more probably occasioned by the serous effusion generally pressing on the hemispherical ganglion, and thus annihilating its function; but if such had been the case, would not this ganglion have been altered in structure?

OPIUM DETECTED IN THE STOMACH SEVERAL DAYS AFTER DEATH.

To the Editor of the Medical Gazette.

SIR,

I TRANSMIT the following case, which proves that opium may be detected in the stomach some days after death.

Samuel Cornish, aged 56, of previously good health, died somewhat suddenly on the 17th of September last. There were some suspicions of his having been poisoned, and I received notice from the coroner to be present at the disinterment of his body; he had been buried twelve days. The corpse was considerably decomposed, of a dark livid green colour, and the abdomen distended almost to bursting with gas. The chest and its contents were found to have been perfectly healthy; but on opening the abdomen it was observed that the whole course of the intestinal canal was highly vascular and congested, putting on a deep purple hue. The stomach contained about 1½ oz. of a thick dirty yellow

fluid; the intestines were quite empty, and, except at one point, free from ulceration. A part of the contents of the stomach was boiled in alcohol, and then filtered; it gave a deep red solution, which stained paper of a bright yellow tint; this was neither deepened or altered by alkalis, while nitric acid changed it to a purplish green: acetate of lead was added to the rest of the filtered liquid, and a copious precipitate obtained; the supernatant solution, when freed from lead by sulphuretted hydrogen, and evaporated nearly to dryness, gave with chloride of iron a greenish tint, and with nitric acid a bright red—two indications of the presence of morphia. The precipitate when diffused through water, and ridded of lead by sulphuretted hydrogen, was filtered and evaporated almost to dryness; it produced with a salt of iron a bright red colour, which was destroyed by nitric acid, potash, and proto-chloride of tin, but not by bichloride of mercury. It gave no colour with terechloride of gold, but white precipitates with lead and barium. From these I inferred the presence of meconic acid, and my former tests indicated saffron; other reagents proved the presence of carbonate of lime, but I could detect no mineral poison. The subsequent examination of the liver, however, proved the presence of arsenic.

It came out in course of the evidence that the deceased had died with symptoms of dysentery, and that the aromatic confection, with opium and chalk, had been administered. The chief feature of the case is, that opium may be detected some time after death. Other considerations are worth noticing here, viz. that the deceased had, in all probability, died from inflammation of the whole intestinal canal; but the upper portions of the small intestines were the most inflamed, and this, coupled with the absence of ulceration about the colon and rectum, indicated something more than dysentery; and but for the examination of the tissues, in which arsenic was found, the cause of this inflammation would have escaped notice.—I am, sir,

Your obedient servant,
H. LETHEBY, M.B.
Lecturer on Chemistry at the
London Hospital.

12, Tredegar Square.

CASE OF ACUTE POISONING BY CARBONATE OF LEAD.*

By JOHN SNOW,

Fellow of the Royal Medical and Chirurgical
Society.

(For the *London Medical Gazette*.)

I was called between 9 and 10 o'clock on Wednesday morning, the 8th of May last, to Henry Woodley, aged 5 years, living at 1, Rose Street, Soho, and found him suffering with symptoms of poisoning. I ascertained that, on the Saturday night previous, he had eaten some white-lead ground up with oil, which another boy had stolen, under the impression it was putty, from the door of an oil shop in the neighbourhood, where it was exposed for sale. The quantity he had was not larger than a marble, and he did not eat it all, as a small portion was found on the floor afterwards. He complained of bellyache the next morning, and his mother gave him a dose of salts and senna: this did not operate, and the pain in the abdomen still remaining on the following day, she gave him rhubarb and jalap, and afterwards castor oil, and the bowels were opened on Tuesday evening for the first time. The child's mother did not think his illness serious, and did not mention it to me, although I was attending her husband; she thought what he had eaten was only putty, which is not poisonous. During Tuesday night the pain in the belly greatly increased, and vomiting commenced for the first time. On Wednesday morning I saw the child as I have stated. He was in great pain, which he referred chiefly to the scrobiculus cordis; he vomited constantly a brownish liquid containing streaks of blood; his skin was hot, and his pulse 140 and hard; the face was swollen and of a purple colour; the conjunctivæ were red, not only from injection of the vessels, but from blood extravasated and coagulated beneath the membrane; the nostrils contained blood, and the body was spotted with petechiæ; the gums were tense, shrivelled, and milk white. Some leeches were applied to the epigastrium, and an emulsion containing Epsom salts was given. He passed some greenish-black semi-fluid

* This was related to the Westminster Medical Society, on the 19th inst.

motions of a very offensive odour. At 11 o'clock the pain continued, with occasional vomiting; the pulse was small and the extremities were getting cold; there was palpitation of the heart. At 1 o'clock, on injecting the bowels I found that there was complete relaxation of the sphincter ani. The pulse at the wrist ceased shortly afterwards, the tracheal r le set in, and he died at 2 o'clock, about ninety hours after taking the poison. The heart beat above 100 strokes after the respiration. There was no delirium or other lesion of intelligence.

An examination of the body was made eighteen hours after death, in which I was assisted by my friend Mr. Marshall, of Greek Street, who took notes of the appearances. The cuticle was loosened from a great portion of the body, and a quantity of serum flowed from the nostrils on moving the head. The gums presented the white appearance observed before death; the pericardium was filled with serum deeply tinged with blood, and each pleura contained several ounces of similar fluid. The heart was soft and flabby, and there was a little red fluid blood in the ventricles. There was ecchymosis of the surface of the lungs, and they were engorged posteriorly. There were two spots of ecchymosis beneath the mucous membrane of the  sophagus near its lower end; otherwise this tube was healthy. The stomach contained a little liquid similar to what had been vomited, and, throughout its entire extent, the mucous membrane was dark brown, swollen, and puffy, and there appeared to be extravasation of blood beneath it in addition to great injection of the vessels: this state did not extend to the duodenum or  sophagus. There was a bright red injection of part of the c cum, but the rest of the alimentary canal was of the natural pale colour, and was not contracted in any part. It contained a little clay-coloured fecal matter in the form of small pellets. The kidneys were large and flabby, and the liver, which was of a darkish colour, instead of presenting its usual firmness, was like soft leather; it could not, however, be torn with greater ease than natural. There was a peculiar odour about the body; not that of putrefaction. The head was not examined. The matters vomited, and those found in the stomach and intestines after death, and likewise the

substance of the stomach, were all subjected to a careful chemical examination, but no lead, or, indeed, any other poison, was detected.

Although slow poisoning by white lead is very common, occurring to painters, and several other classes of workmen who use it or manufacture it, acute or sudden poisoning by this, or indeed any other salt of lead, is not common. They are seldom chosen for murder or suicide, and, although extensively used in various trades, they do not often lie exposed, like arsenic or oxalic acid, in such a shape as to be mistaken for any article of food or medicine. In the few authors to whom I have referred, I have not met with any fatal instance of poisoning by a single dose of carbonate of lead. Mr. Taylor mentions, in his Jurisprudence, the case of a woman, attended by Mr. Cross, who took six or eight drams of it, by mistake, for magnesia, and recovered by the use of remedies. Orfila gave half an ounce of it to a dog, and it vomited several times within twelve minutes, and was no worse afterwards; and Dr. Christison quotes from a German journal the case of a young woman who swallowed accidentally an ounce and a half of it, without any bad effect, either at the time or afterwards. That it is very poisonous, however, we have sufficient evidence; for the carbonate is the form in which lead is introduced into the system of painters, and of most artisans who suffer from it, and, generally, of those who are poisoned by water impregnated with this metal. The morning after this child had taken the poison, his mother gave him, as it happened, some Epsom salts amongst senna tea. Now sulphate of magnesia is an antidote for the soluble salts of lead, but as it does not act on the carbonate at ordinary temperatures, it could only be of benefit by neutralizing any portion which might be decomposed by the acids of the stomach, and unabsorbed at the time. Several hours had already elapsed when it was administered, and as it was not repeated, we need not wonder that it did not stop the fatal effects of the poison. In addition to emetics and the stomach pump, Mr. Taylor very judiciously recommends the combination of some weak vegetable acid, as vinegar or lemon-juice, with solution of sulphate of soda or magnesia, in cases of acute poisoning by carbonate of lead.

From what I could learn, this child appeared for three days to suffer only from symptoms of lead colic, viz. pain and constipation of the bowels; and the intense and general gastritis of which he died would seem only to have commenced, or at least to have become severe, about twelve hours before death, as it was not till then that vomiting came on.

When I saw the child, which was not till within five hours of his death, he seemed to be labouring under all the effects of a corrosive or irritant poison, which one would have supposed had been taken only a few hours, instead of nearly four days. In the case I have quoted from Mr. Taylor, and in those I have seen recorded, of poisoning by the other salts of lead in large doses, vomiting, and other symptoms of violent gastric irritation, came on soon after the ingestion of the poison. The comparative mildness of the symptoms in this case for three days probably depended on the incorporation of the white lead into a tough mass with oil, which might retard its operation, and cause it to act only by degrees, in proportion as it became digested.

The white, tense, and contracted state of the gums, is worthy of notice. The gums were white and excoriated in a case of poisoning by the acetate of lead, quoted by Mr. Taylor, when the patient recovered. Acetate of lead is administered, occasionally, as a remedy in mercurial ptyalism. Dr. Burton has directed attention to a blue line on the gums in persons suffering under the chronic influence of lead; and I have, in two instances, seen the gums severely ulcerated in painters who had not been taking mercury.

No lead could be detected in the body after death, or in the matters vomited: but we need not be surprised at this, when we consider that the patient survived till the fifth day. It is a negative result that has been obtained in other cases of death from this poison. He had been vomiting several hours before any thing was saved for examination, and the fæces passed during life, which exhibited a peculiar dark colour, such as a mixture of sulphuret of lead with them might be supposed to occasion, were not subjected to analysis.

Frith Street, Soho, Oct. 1844.

ON THE TRANSFORMATION OF PUS CELLS INTO A MUCCOUS OR FIBROUS TISSUE.

By WILLIAM ADDISON, F.L.S.

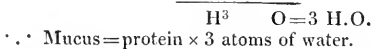
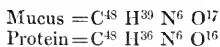
[Continued from p. 73.]

III. *The Fibrous Tissue of the Saliva.*

ON referring the other day to a paper "On the Composition of Mucus*," published in the MEDICAL GAZETTE of July 29th, 1842, I found the following remark: "If mucus be treated with absolute, instead of dilute alcohol, it becomes coagulated, and in this state it is not possible to diffuse it through water." This remark suggested to me to try the saliva with alcohol (spirits of wine of the shops), and I made the following:—

EXP. 15.—A watch-glass was half filled with spirits of wine, and a quantity of frothy saliva collected in the month was allowed to fall into it: it was well stirred with the point of a needle, and in a short time the air-bubbles had burst and disappeared. A mass of white fibrous matter collected on the point of the needle, which when pressed quite flat and closely between two slips of glass, exhibited so coarse and tendinous a looking fibrous-tissue, that neither microscope nor lens were required to see it, and when rolled up a little between the fingers it was found exceedingly strong and elastic.

Dr. Kemp says, that if we compare the chemical formula of mucus with that of *protein*! we have—



He then goes on to notice "the remarkable resemblance of the chemical composition of mucus to that of the middle coat of the arteries;" and observes, "that bronchial polypi and the false membranes in croup are probably dense masses of altered mucus." From the above formula, I presume, looking at the results of my experiments chemically, we may conclude that both mucus and the saliva are hydrates of fibrine, alcohol, and the acetic acid, ab-

* By George Kemp, M.B. Pet. Coll. Cantab, Fellow of the Cambridge Philosophical Society.

stracting the water and precipitating the fibrine as an elastic fibrous-tissue.

Exp. 16.—A larger glass capsule was procured, and a larger quantity of saliva was made the subject of experiment; so that a much greater quantity of the fibrous tissue was formed. This was collected, and the alcohol allowed to drain out; afterwards it was placed in liquor potassæ for some hours, whereby it was reconverted, in great measure, into a transparent mucus. I conclude (still taking a chemical view of the results), therefore, that a strong watery solution of potassæ (liquor potassæ, *Brandish*) furnishes the requisite amount of water, and enables fibrine or fibrous tissue to resume the form of what in chemistry would be termed a hydrate (*i. e.* of a mucus), or when pus-cells burst under the influence of the alkali, the plastic element at once combines with water.

Now, according to my views of the process of secretion and nutrition,—and these views are, I contend, capable of as strict a demonstration as it is possible to conceive any other intricate inquiry to be,—according to my view, I say, the colourless blood, the pus, and the mucous corpuscles, are (essentially) living cells containing within them a plastic element (protein, if so it be) and living molecules: when the cell bursts the molecules retain their vitality, but the plastic element may become subject to chemical laws, either fibrillating and forming a fibrous tissue, leaving a residual albuminous material to mingle with the blood fluid, or combining with water to constitute a mucus. Thus far, and so on in the descending series, I can readily conceive that chemistry may aid us in our physiological difficulties, pointing out the changes which the elements of the tissues and secretions undergo when liberated from the immediate control of a vital power by the rupture or disintegration of the elementary cells; but we must either resign ourselves entirely to chemical views, and take their explanations as the basis of our physiology, or deny that chemical investigations can furnish us with all the knowledge we require in our endeavours to alter or to vary the elementary materials of the tissues and secretions while they yet remain inclosed within the body of a living cell, or in determining

certain vital operations going on within the cell, produce an element resulting in a fibrous tissue, a mucus, a tubercle, or a secretion.

I may be thought, perhaps, too warm an advocate for the microscope, when I contend that neither putrefaction nor fermentation are, strictly speaking, chemical operations; the results, indeed, come fairly within the province of chemistry, but these results can no more be obtained without cell-life, than a secretion*.

The science of chemistry was formerly limited to the changes and transformations of inorganic bodies, as contradistinguished from those due to the activity of a principle of life; but now the aspect of the science has changed, and from the extended views of its present eminent professors, it appears no longer confined within its former limits; they seek to bring within its sphere all the changes and metamorphoses of matter, whatever may be their kind or nature; and instead of our having an inorganic chemistry, and a vegetable and an animal physiology, we have substituted an inorganic, a vegetable, and an animal chemistry. If this be really what we are to come to, then let Liebig, or Dumas, give a new definition to the science.

I well know how utterly impossible it is to define the line between vegetable and animal organisms; still, no one would attempt to classify all living forms under the one or the other of these heads exclusively, calling them all vegetables, or all animals. So, likewise, it may be impossible to limit the explanations and doctrines of chemistry strictly to inorganic or lifeless matter, in any more satisfactory or definite manner; nevertheless, all those changes which we know to be produced by a vital principle, ought to be kept distinct from the domain of the chemical philosopher; otherwise, at once enlarge the boundaries of chemical science, and make it synonymous with physiology.

Great Malvern, Oct. 30, 1844.

* By cell-life, I here include those immeasurably minute, active, and voluntary moving forms, always, as far as my experience goes, to be found in every putrefactive matter.

PRACTICAL REFLECTIONS ON THE
CAPILLARIES OF THE HEAD.*

BY T. WILKINSON KING, F. R. C. S. E.

The Vascular columnar mass of the body has least distension above. The scalp and face differ. Weather-beaten aspects. Effects of a strong heart, &c. Polypus Nasi. Nævi. Epistaxis. Hæmoptysis. Apoplexy, &c. Lupus. Contracted Mouth. Normal nutritious equal—abnormal varying.†

VARIOUS considerations have led me to take up the subject of a not very old lecture; I think it deserves some attention from the profession, and I would hope that its introduction in this place may lead to useful comments on the part of those whose post it is to lead in the scientific treatment of disease.

The time is past for the chivalry of discussion, and the heroism of elocution. A plain printed page, like the modern coin, closely defines our notion of quantity, and leads most readily to a true estimate of the metal circulated‡. I shall rest tolerably well satisfied if my coin may pass for only legitimate copper.

The arteries and veins of the head are of remarkable comparative tenuity—they have least distension to resist; those of the feet have the most free nutrition. The sinuses of the dura mater may seem an exception to the idea of feeble canals, yet when we look a little further, and observe that a different set of tensions than tubular fullness exerts is the cause of their aponeurotic solidity, we find actually the venous tunics here reduced to the extreme of atrophy.

It may be thought that a column of

* Read before the "Physical Society" of Guy's Hospital, Oct. 5th, 1844. Some of the notes, &c., were not read.

† It is needless to shew that the following is an extension of views before advanced in the Medical Gazette. I deem it reasonable, however, to state that the precise relation of the present reflections to the main doctrines of Medicine, is explained in my "First general Laws," &c.; their connexion with Brain pathology I am already engaged with, and hope to explain further.

‡ Suppose, in the progress of events, a few more Journals, and a little more analytic summary of medical views in our Periodicals, and it seems to me that teaching will be resolved into tutorship, and Medical Societies will be devoted to coffee and compliments. A new order of things equal to the wants of 50,000 doctors appears already half accomplished.

blood, rarely amounting to one of six feet in vertical height, should cause but little difference in the vascular distension of parts. Poiseuille discovered none.* We do see, however, that position affects the circulation of each part of the body in health, and still more in disease. By day, an excess of distension operates below, a deficiency above. At night the balance is restored, compensation operates, repair is accomplished. Something might be gained by farther contrasting the states of the head with those of the feet, but I shall not try your patience to this extent. Catarrh, frontal caries, and tic, above; hydrocele, anasarca, varix, node, and gout, below; each the most frequent of its kind, may suggest all my meaning.

I shall not dwell upon the great numerical proportion of diseases of the head as a whole, but simply advert to such a series of changes, as will, I hope, establish the main proposition, that the peculiarities I speak of do exist, and have a direct practical import, as well as a general relative application to the changes in the entire body.

It would be natural, perhaps, to look towards the vertex of the head for the most constant and marked results of the vascular peculiarities we are considering; and I suppose these are seen in the silvered or bald head, and the glossy scalp at the period of declining life. Again, the most common of all

* "Not only does this equality of pressure exist throughout the arteries of the same vessel, but it is also similar in animals, differing considerably in magnitude and in strength. M. Poiseuille found that the hemodynamometer, when applied to the arteries of a dog, rabbit, or guinea-pig, indicated the same amount of pressure as when applied to those of the horse. So that a heart weighing one or more ounces transmits the same amount of pressure to the walls of the vessels as one weighing six or seven pounds." We must allow for defects in the instruments.

"The circumstances that modify the pressure of the blood, are, according to M. Magendie, referrible to two principal causes—the mass of liquid in movement, and the force of impulsion. We must also take most accurate note of the movement of respiration. M. Magendie found, in his experiments, that the force with which the blood moves in the arteries is diminished during inspiration, but augmented during expiration; and that during the action of coughing also the movement of the blood is accelerated. Hence, he remarks, the heart is 'the constant agent of the circulation; but the respiratory movements exercise so powerful an influence in this way, that during deep expiration the force that moves the arterial blood becomes almost double as great as in the normal state.' Lecture 6th."—*Hay's American Journal*, Nov. 30, p. 139.

leprons affections is that deteriorated production of cuticle which is hardly thought to be anormal.*

The scalp, however, in civilised life, and especially in females, is much protected, while neighbouring parts are habitually and unequally exposed, as well as more variously organised. In this respect, we might distinguish only two surfaces on the head, an anterior and a posterior: and in regarding the peculiarities of the face, I would look for causes of disorder; 1st, in the delicacy of its vessels; 2dly, in the variety of its functions; 3dly, in the circumstances of exposure.

We cannot but conclude that ruddiness must be very specific to be healthy; and, on the whole, perhaps, a certain general, but varying hue, inclined to red, is nearest to health. A well nourished capillary admits of increased injection with difficulty. The freckled and sunburnt hues depend of course on rete mucosum.

The cook, the coachman, the sailor, and the old Anglo-Indian, present different effects of facial exposure. I resolve all these into daily repeated deteriorations, and various healthy or irregular acts of repair. Moderate colour, and even surface, indicate normal changes, whilst wide capillaries, and turgid unequal surfaces, as well as atrophy, are parts of the less healthy weather-beaten aspect.

The hands are not less exposed in these cases, but their circulation is more uniform with, and their changes consequently more closely follow, those of the trunk.

It is worthy of remark, that although the face is the dial of expression, on account of its own internal workings, it is no less so from the incessant influences of remoter parts. Loss of blood, mere gravitation of blood and abstinence, tell first here; and these are not the only changes of vessels which are independent of local nerves.

I scarcely know if the power of the heart has been duly considered, with reference to these affections. From experience, I cannot impute great effects to ordinary venous obstruction, nor to simple hypertrophy of the left ventricle, but it may become more essential to reflect on these disturbed relations, when other disadvantageous

circumstances are concurrent. The softening of brain which so often precedes apoplexy is an acute or chronic nutritive change, and is numerically quite as much connected with visceral depurative defects as with disordered heart or arteries. Hypertrophy of a ventricle, like that of a biceps, depends on its labour, together with its nourishment. A thick ventricle, with diminished impediments, is a physiological anomaly: the whole heart must waste with declining exertion. Dilatation, or unhealthy hypertrophy, may be only increased impediments; and even much simple increase of power in the left ventricle, with settled obstruction in the ascending aorta, cannot augment the force of the circulation in the head in any case.

The occasions, however, in which the heart does operate mischievously on the head, are not, I conceive, few or trifling. We may find, at one time, a strong dilated labouring heart, by a little change of health, regaining a smaller size, and greater strength, without compensating changes elsewhere; and irregular repletion, exertion, exposure, and posture, may all combine, in addition, to increase a local evil, whether in the head, the lungs, or elsewhere.

A middle-aged man, with turgid, and almost livid face and hands, with or without palpitation, may be said to labour under congestion; or, rather, ill-nourished, and over-distended capillaries, with deficient excretions. Courses of medicine; with very little judgment, perhaps; or improved habits, restore him repeatedly. The same applies to simple palpitation, (I would almost say hourly): yet the case of a strong heart, and yielding capillaries, is not a mere supposition. The muscular diathesis, and the plethoric, are distinct. There may be universal congestion, and the feeblest muscular organs, and vice versâ. With great hypertrophy of the heart, we find pallor or lividity, a florid face, or deeply turgid capillaries.

In the older adult we may often find deteriorated, unequal hypertrophy, resulting from too free oscillations of nutrition; at least, I am persuaded that these expressions, if they do not totally explain the changes which we are all acquainted with, (vascular tubercle of the nose, &c.,) are yet fully consistent with the foregoing opinions; and I think they are in a measure indispen-

* *Pityriasis*.—Authorities advise good brushing, no brushing, &c. &c. Improvement depends on the nutritions from within.

sable to our philosophy, unless physics, as well as humoralism, are as nothing in disease. I apply the like explanations to the tumid nose and upper lip of youth.

Simple polypi of the nose are exceeded numerically by the like affections of the lining of the uterus, which, seem a kind of succedaneum for generation. The nasal mucous hypertrophy depends so much on diathesis, season, and climate, and even evinces so much subjection to internal remedies, that I venture to rank it as one distinguishing mark of the delicate, susceptible, and variable circulation of the summit of the vascular pile.

I think it is a fact, that obstinately increasing nævi and varicose arteries affect the head in particular, and we ought to remember that good nutrition is the direct means of reducing all blood-vessels to a normal mean, and settled relative proportion. This does not apply less to polypus, tumid tonsil, "relaxed" sore throat, and the hoarseness of debility.

Many physicians may feel disinclined to regard epistaxis as an important disease, but in this place I wish to make the most of it. Why are the nasal vessels more prone to yield than any others in the body? Shall we suppose weakness, or obstruction, or excessive impulse? I conceive the first to be often, and perhaps constantly, the real state, and would consequently avail myself of the warning, if only to anticipate other signs of constitutional debility. It is not true that such vessels usually give way from genuine plethora; nor is it ever right to refer a local change to a general state exclusively.

I suspect that the first hæmorrhage of decline is often from the larynx.

I infer this with more or less confidence under the following circumstances. If it be fairly observed, that the red sputum be coughed up, however easily; if one only out of several portions of mucus, or few out of many, be streaked or tinged with blood; if the blood have a fresh appearance, and not a brown colour; if it be in small quantity, and little mixed with accompanying mucus; if coughed up after exerting the voice, (only a few spoonfuls perhaps), fresh looking, and (blood having trickled down into the lung,) if the subsequent expectoration be at first more clotted, but then for

three or four days less and less dyed, but more brown, and gradually replaced by the variable catarrhal mucus of disordered health.

There are, I suspect, chronic diseases of the sacculi laryngis. A patient may detect uneasiness here, and every two or three days may void (at intervals) a pair of mucous masses, more or less stale, offensive, or rough to the taste, and dull or dark, or even variously tinged with pus or old blood, or brightly streaked red. The blood-tinged sputa of settled phthisis is still distinct from the preceding. It has no specific source. The copious hæmoptysis of the more healthy may yet be only laryngeal. There are, I find of late, most abundant proofs amongst authors, that the bleeding which rather frequently concludes phthisis is from a large ulcerated vessel. These observations are of most value with respect to the earlier signs of disordered nutrition, a due attention to which, and obviating the causes of variable decline, may be attended with the happiest results.

To return to my immediate subject. The most common spontaneous extravasations of blood are in the head; and the like occur in the eye, orbit, and face.*

The common catarrh, sore-throat, wasting of the gums, and of the face, all seem to me to depend for precedence on their comparative disadvantages as to site.

Lupus exedens is amongst the rare yet marked peculiarities of the face. One of its grand characteristics is a distinct and repeated transitory act of cicatrization; and indeed, the evidences of reparative power in this protracted disorder are hardly second to those of simply failing nutrition; the two alternate, and may be nearly equal for years. Here, I think, we discover the specific trait of the disease. No kind of adventitious tubercle. Ill-nourished scaly skin; a blotch, the centre of which may or may not die; a pustule devoid of power to make a projection—tardy ulceration and repair, and this repeatedly. I should be very much struck to find, as some describe, cicatrization on one side of a sore and ulceration on another, and the two *progressing* through the very same hour, instead of succeeding each other. The nose may

* A small spontaneous ecchymosis in the eyelid adds great significance to a doubtful fit.

often be said to be shrunken rather than eaten away. What a striking indication of oscillating nutritive balance in the general body! How strong a suggestion, that the high and solitary promontory is feeble as well as exposed; seeing it alone of all the body suffers thus! Though all indicates a cachexia, countless successive wounds and rubs elsewhere may be repaired fully.

It is of course too plain, that in process of time ulceration, or I would rather say atrophy, prevails. The health and the disease get worse and worse without the need of debilitating remedies, as alteratives, &c. Very long, and perhaps the only feature of the case throughout, is scanty and deteriorated nutrition. I do not know that this may not include all the specific disease. The patient dies with the feeblest serous inflammations, and perhaps, effusions.

It may at least illustrate my meaning, to prescribe recumbency, and even such practices as scrubbing floors, for these patients. May not local applications be too much like exposure?

I cannot but regard this view of Noli as a new and essential part (the zero) of a great systematic arrangement of all the forms of organized tubercle classed as cancer.

Mr. Liston has given an account of herpes exedens in a recent lecture in the *Lancet*, and advises free escharotics. It is evident that he does not fully distinguish the case devoid of tubercle and hypertrophy; and he sufficiently distrusts the complete efficacy of the remedies. It is but a small thing for me to differ from this gentleman's opinion, but I would strongly urge the simple view of remedying the failing nourishment in the specific case.

There are cases which look almost as much like deteriorated nutrition as deficiency: I allude to the rare and extreme contraction of the mouth, which at last appears almost as a pin-hole. Here is evidently some atrophy, but some induration. The change is attributed to mercury, &c. The disorder seems to become stationary with improved health, but it is hardly curable. Forceful extension is only aggravation.

It must appear that I have not made out a very strong case: I may, indeed, admit that I should fear to attempt so much. The physiologist may think the first view of my case very feeble,

but I do not suppose that the pathologist can entirely reject it. The truth is, that in health the different degrees of vascular tension, and consequent nutrition, in different parts of the body, ought to be difficult of detection. Where the nutrient molecular changes proceed with vigour and firmness, all should seem equal; if any part be weakened its pure restoration should be speedy: yet abstinence will shew itself first in the face and mind; and the capillaries most concerned will necessarily yield the more to the new restoring afflux until the due balance is again in a manner fixed*.

* It may not be amiss to subjoin, without discussing, some views of M. Magendie, who is one great advocate of physical and humoral things in medicine.

"Every one is aware," he remarks, "that during very hot weather the face is more highly coloured than at other times, and the movements of the heart more rapid. A greater quantity of blood is constantly passing through the vessels, and the cutaneous and pulmonary exhalations are very sensibly increased in quantity; hence the craving we feel for aqueous drinks, in order to restore to the blood the water it is constantly losing. But it is on the capillary circulation more especially that the temperature of the blood exercises a very manifest influence." * * "The variation of heat acts not only on the blood in the capillary vessels, but dilates the membranous walls of the latter, enlarges their cavity, and modifies the hydrodynamic phenomena. Pulsations are felt where they did not exist before; several globules now pass abreast in the tubes, which before scarcely allowed of the passage of one; in a word, a new state of things discloses itself for the investigation of the physiologist."

"When the practitioner wishes to increase the activity of the circulation in an individual, and facilitate the passage of the blood through the whole vascular system, he orders a warm bath; its effects are soon felt through the entire frame. The respiration becomes accelerated, because, as a greater quantity of oxygen is required, the tissues swell, and the external surface grows red. Again, if the object be to diminish the activity of, for example, the cerebral circulation, and to increase that of distant parts, you make use of pediluvia. The phenomena ensuing are precisely the same as in the preceding case, except that they are simply local. Instead of acting on the entire vascular system, you limit the action of the elevated temperature to a few of its tubes. This, too, is an exclusively physical result. Let us take an example of the opposite kind. An individual puts his hands and feet in snow: the fingers and toes immediately become white, in consequence of the reflux of blood to the central parts of the limbs. The capillaries of the periphery of the body, when submitted to the action of sudden cold, become unfit for carrying on the circulation. Part of the fluid they contain passes into the veins, and, as they no longer admit that which the arteries carry to them, they are really for a moment empty."

This M. Poiseuille has proved by direct experiment. "Cold baths," observes the lecturer, "are recommended in cases where the indication is to soothe general excitement, characterised by excessive activity of the circulation. When the forehead burns, and the temporal arteries beat violently, we apply ice, or some frigorific fluid, to the part. When too much blood flows to the brain, we have recourse to cold affusion." * * "The treatment of fractured limbs by constant irriga-

Let it be granted that in syncope all sanguine supplies are failing; yet may we not decide that the top of the blood-tubes suffers most? Let us turn, now, to those minor oscillations of visible imperfect nutrition in the head, which coming and going in cachectic and delicate persons, ever variously throughout the day, betoken almost as much power of repair as actual delicacy, especially if we consider that the constitutional weakness is only kept up by repeated mischiefs from without, which judgment, or even accident, may, and does,

tion with cold water, furnishes another example of this mode of action. The prolonged continuance of a low temperature diminishes the vascular pressure, prevents blood from rushing in the natural quantity towards the seat of the lesion; in a word, prevents the phenomena called inflammatory from taking place. When we plunge into cold water during very warm weather, a peculiar sort of constriction is felt at the thorax. This, again, is a purely physical phenomenon. Less blood traverses the capillaries, consequently it accumulates in greater quantities in the larger trunks; these, distended as they are, press on the neighbouring organs; hence the uncomfortable sensation of which the patient is conscious. It disappears when the equilibrium is restored throughout the sanguineous system; and so the sudden immersion of the whole body renders its effects much less sensible."

In proceeding to consider the circulation through the capillaries, the lecturer notices, first, the extreme minuteness of these vessels, and the peculiar properties of the blood which enables it to traverse tubes of so small a calibre.

The diameter of the capillary vessels has been computed to be about the 1-150th, or 1-200th of a millimeter—(a millimeter equals the 0.039370th of an inch.) Now it is with the greatest difficulty we can succeed in forcing water, or any analogous fluid, through glass tubes only 1-10th of a millimeter in diameter; and it is almost impossible to drive a liquid through tubes of a smaller diameter, no matter what force be employed. We meet with the same resistance in injecting water into the mesenteric artery of a frog, with a view to force its passage into the continuous vein. The fluid employed is, in a great part, extravasated into the surrounding tissues, and but a small quantity reaches the desired point.

"My inquiries up to the present time," the lecturer remarks, "go to prove, that the passage of the blood from the arterial to the venous capillaries is effected by means of a nice adaptation of its physical properties to the physical endowments of the vessels." * * "That if a single one of the properties of that fluid be modified, its movement throughout the capillary system becomes impossible."

It is to the viscosity of the blood, mainly, that M. Magendie attributes its capacity to traverse the capillary vessels. The viscosity of the blood he pronounces an indispensable condition for its free circulation. This property he illustrates by experiments on inorganic tubes. Thus, notwithstanding the impossibility of introducing water into a tube of extremely small diameter, whatever force we employ, yet if any mucilaginous substance, as gum, gelatine, or albumen, be added to the water, it may be injected with ease. This fact is proved by some ingenious researches of M. Poiseuille."—*Hay's American Journal*, Nov. 1839, p. 145-7.

remove in thousands of instances. I allude particularly to the complaints of the young adult—suffusion after eating, the blushing nose, blotchy affections, tooth-ache, and a considerable number of other varying or transitory affections in the way of pain or vascular injection.

Why are they of short duration; not persisting from bad to worse? Why do we so often find them capable of arrest in any stage of their course? To sum up: I would suppose fluid stores within, varying as to quantity and quality—external exposures also changing, and still more, the wear of every part by turns*. I suppose the loss of solid or of fluid to be in a great measure the cause and regulator of its own restoration. When disease comes, the readiness with which the head suffers is peculiar. Gravity and other causes affect other parts in a peculiar manner, and for specific reasons†.

36, Bedford Square.

ANALYSES AND NOTICES OF BOOKS.

"L'auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

Guy's Hospital Reports, Second Series. No. IV. Oct. 1844.

THE present number opens with the communication from Mr. Alfred S. Taylor, of the case of a male child, aged 14 months, who died eighteen hours after taking an overdose of a sleeping mixture administered by its nurse. Powdered opium had been put into a phial, hot water poured upon it, and after well shaking, a tea-spoonful of the contents was given, and repeated at short intervals till about three and a half tea-spoonfuls, containing not less than three grains, and probably more, of opium had on the whole been taken, when the child speedily became quiet, and fell asleep. It awoke so far as to take some milk six hours afterwards, but soon went to sleep again, and nothing further was observed till the morning, nearly twelve hours after the first dose, when it was found breathing very hard. A medical man, who was

* See a paper on Variable Disorders, &c. *Guy's Hospital Reports*, No. 11.

† See a View of the Humoralism of "Urinary Structure," five papers in the *Lancet*, 1843-44.

called in, found the child perfectly unconscious, the breathing stertorous, the hands slightly convulsed, and the eyes covered with a thick film. All his efforts to remove the insensibility, and remove the symptoms, were unavailing, and the child died eighteen hours after taking the first tea-spoonful.

The remaining contents of the phial, and about a drachm of "a white thick viscid liquid, without any particular smell," which was removed from the stomach, also some liquid from the small intestines, were preserved for analysis, and led Mr. Taylor to institute a series of experiments upon questions relative to criminal poisoning by opium which may arise, and which occupy the larger portion of his communication. The analyses and experiments, and their results, are presented to the profession in the lucid style and logical manner which so strongly characterizes the writings of this eminent medical jurist. The details comprise, 1st, an inquiry into the solubility of opium in water; 2dly, the difficulties connected with the analysis of morphia and meconic acid, and the most striking chemical properties of those two bodies; 3dly, the relative power or delicacy of the tests for morphia, with the smallest quantity of that alkaloid susceptible of detection; 4thly, the degree of solubility of meconic acid in water; 5thly, the limit of the power of a salt of lead to precipitate and separate meconic acid in opiate mixtures; and 6thly, the smallest quantity of meconic acid susceptible of detection, either free or combined with the oxide of lead, and by inference the smallest quantity of opium. Opium was readily detected in the mixture, but was not discoverable in the fluids removed from the body. Mr. Taylor informs us, that owing to the facility with which opium may be procured, and the improper use of the drug, cases of poisoning by it constitute about one-third of all those that come before the coroner; and that "Parliamentary returns shew that the deaths from opium throughout England and Wales are not less than one hundred per annum; and this great mortality from one poison occurs chiefly among infants and young children."

talis, and its uses in diseases of the heart, with some general rules for the employment of this drug, originally read before the Physical Society of Guy's Hospital. These conclusions are drawn from more than 400 observations, originally commenced at the suggestion of Dr. Bree, and made during a five years' official connection with the St. John's Hospital, the Farringdon and the Tower Hamlets Dispensaries. In 184 cases the drug was administered alone, or in vehicles incapable of modifying its action—a circumstance requiring notice, as the author "knows no medicine whose effects are more modified by prescriptive combination than digitalis."

Dr. Munk considers sedative action on the heart, and diuretic influence, as the two best marked, and indeed the only, properties of digitalis. The former influence is of two kinds, the depressing and the antispasmodic. The depressing action is best secured by the exhibition of the tincture alone; the antispasmodic by the combination of the tincture with camphor, assafoetida, galbanum, ammonia, or other antispasmodics; while the diuretic property is seldom or never advantageously obtained but by the infusion. The powder he finds uncertain and unmanageable; and of the peculiarities of the extract, recently admitted into the Pharmacopœia, if it contain any save that of uncertainty, he has no personal knowledge or favourable impression from the statement of friends who have employed it. He believes the poisonous symptoms, which in a few instances have occasioned death, only become developed when the drug fails to act in its normal manner as a diuretic or sedative: once these effects kindly induced, the medicine may be continued with safety for a considerable period. If these effects are not evidenced in a few days, there is danger of its accumulation, and the appearance of its poisonous symptoms. Of this influence, from over-dose of the infusion, an instructive case appeared in our pages in August last.

The next paper, by Dr. Munk, contains conclusions on the action of digi-

MEDICAL GAZETTE.

Friday, November 22, 1844.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

ADDRESS OF THE SOCIETY OF APOTHECARIES*.

THIS pamphlet is an able exposition of "The Bill"; and having it to refer to, no one need err from want of a guide through the intricate mazes of that measure, or blind himself longer to the effects which its becoming law would almost certainly have upon the position of the great body of the medical profession in these countries. The only fault of the Address, in our opinion, is, that it is pitched in too low a key. When men feel that they have been treated unhandsomely, they speak with more of *verve*, and in accents that are louder than wont; and such a style carries conviction to the mind of the listener that the speaker is in earnest. It is not otherwise with writing; the hand is an index of the state of the mind even as true as is the tongue, and burning words fix themselves on paper, and find their way to the heart, nearly with the same force through the chambers of the eye, that they do through the porches of the ear. The Address is somewhat tame, then; but, because it is free from passion, its logic, it may be believed, is by so much the better; if the oratory be less, the reasoning is more; if feeling be wanting, truth stands there unveiled, without disguise. He who wrote the Address is a very able man, and has not belied the con-

fidence which his brethren of the Worshipful Society of Apothecaries have placed in him.

In our comment on the "Statement of their Administration of the Apothecaries' Act," by the Worshipful Society, we expressed dissent from their assumption of the large measure of credit to which they there lay claim in the progress and improvement of the science and practice of medicine: we believe that progress, that improvement, to have been totally unconnected with the existence of the Society of Apothecaries, and with any one of their enactments, or with all of them put together. It would not be fair, probably, to say that the Society had rather stood in the way of improvement, "though we will stand accountable for as great a sin as that too"; we are persuaded and know that the profession at large have got beyond the Apothecaries' Company and their requirements: the general practitioner, who is the representative of that respectable body among the better, as they are called, or more educated classes, is all but invariably the Member of the Royal College of Surgeons as well as the Licentiate of Apothecaries' Hall. Society, and the progress of medical science, required more than did the Law and the Examiners of Apothecaries' Hall, and he therefore aimed at, and aiming at achieved, the higher grade of surgeon in addition to his title of apothecary.

In its "Statement," the Society declared that in their judgment the scope and tendency of the Bill for the Regulation of Medical Practice was to degrade, if not to destroy, the class of general practitioners." In this Address they have sought to show that it is so in fact. Now although we are also afraid that the bill of Sir James Graham would have such an effect, we have the misfortune still to differ with the Worshipful Company as to the cause of

* An Address by the Society of Apothecaries to the General Practitioners of England and Wales, on the Provisions of the Bill "For the Better Regulation of Medical Practice throughout the United Kingdom," and their probable influence on the Position and Prospects of that Branch of the Medical Profession. 8vo. London, pp. 55. Hightley.

this; we do not believe that the conclusion they point at is to come "because it is proposed to take away the power from them of controlling the education and conducting the examination of their own class"; nor yet because the Bill "would repeal the checks upon the practice of unqualified persons, without substituting any provisions by which such persons might be prevented from practising in future."

In connection with the first of these points, what is the fact? That it is not, and never has been, held any honour to belong to the Apothecaries' Society; the practitioner of medicine has gained nothing in public status or estimation by his forced association with that body; he has much rather connected himself with it as a positive evil: the license was indispensable to him as a legal title to practise, and therefore he took it—never of free will and choice. He never paraded himself before the world as the apothecary; it was always as the surgeon. When no honour is gained by a title, or by following a particular course prescribed, then none can be lost by abstaining from that title, by ceasing to pursue the line chalked out. The profession of medicine has been advancing with at least as rapid strides on the Continent, in France and Germany, and in America, as it has in England, and in none of these countries have men in the grade of the Court of Examiners of the Worshipful Society of Apothecaries one word to say in the examination of the practitioner of medicine; and if there be enactments against unlicensed practitioners in the continent of the old world, there are none in force in poor Scotland, where cheapness is necessarily a great consideration, nor in many of the States of the American Union. It is, in fact, the long and intimate connection between the profession of medicine and the trading Company of

Apothecaries that has occasioned much of the difficulty that is now experienced in reference to unlicensed practitioners in England and Wales: a state of things has here been engendered which exists no where else, and which brings it to pass that the example of Scotland and America in this respect cannot safely be followed in England. A large proportion of even the educated classes in England at this moment think that he who deals in drugs knows as a matter of course how to prescribe them.

"The Society disclaim any intention of imputing to the right honourable gentleman by whom the Bill has been introduced, that he desired what the Bill (if it become a law) will assuredly bring about. He has been obliged to derive his information on the subject on which he proposes to legislate from others; but that his advisers can be ignorant of the tendency of the Bill which they have counselled, it is hardly possible to believe; for if the avowed object had been to depreciate the standard of qualification of the general practitioner of medicine, to lower his professional status, and to diminish his claim to public confidence, it would be difficult to have devised a measure better adapted to the purpose."

We agree with the Society in this particular; but wherefore—how—has this New Medical Bill any such effect? Not, we opine, because it contemplates the extinction of Apothecaries' Society as guardians of the education and judges of the competency of the future practitioner of medicine, but because it cuts him off from each and every one of the time-hallowed institutions that are connected with medical science in the public mind, from association with establishments where the heads of the profession, the great high priests of Æsculapius, must still be congregated, and proposes to leave him a kind of lopped branch of the medical

tree—an abscissa of the medical profession, properly so called; upon a footing with the licensed victualler in society, or at most with the licensed attorney, whose name is sharpset, and in the lowest grade is tantamount to knave and pettifogger. This is the degradation which the Bill, if it does not contemplate, would nevertheless, we think, effect. To suppose, however, that in the present day any such measure can be carried through the two Houses of Parliament of Great Britain, against the sense and opinion, and interests, of such a body as the general practitioners of medicine of England, Members of the Royal College of Surgeons, and Graduates in Medicine of the University of Edinburgh, in the majority of instances, as well as Licentiates of Apothecaries' Society, seems to us an absurdity. By ruse or finesse, by trick or chicane, in days gone by, such a measure might by possibility have been carried through, and have lived a session or two; but forewarned is forearmed in such a case, and with free tongues and unfettered pens, and the steam press at their back, the members of the medical profession, if true to themselves—by which we mean in all that is for the general, not for any peculiar advantage—may not only bid defiance to their enemies, but being roused they need not now quit them till they have discomfited them utterly.

"In every civilized community," says the author of the Address, "the health of the people is a subject of common interest, and in proportion as any state advances in civilization, the regard for human life is more strongly marked, and its preservation becomes an object of greater solicitude, and a duty of more acknowledged obligation. This regard for the public health is the principle recognized in the preamble of the present Bill, and is the principle upon

which we understand all medical legislation to be founded." Unquestionably; but what does the new Bill in connection with this position: "it sweeps away, in a single clause, the whole of the preceding legislation of the country, every provision, wherever found, which imposes any restriction on the practice of medicine and surgery." (p. 10.)

It certainly is a *new* principle, that ignorant pretenders to medical skill are to be allowed to pursue their dangerous practice with impunity, and to have it declared by a deliberate act of the legislature that it has ceased to be an offence against the law of the land for them to tamper with the health of the community.

The Bill, however, is not in harmony with itself in all its parts: no one is to be held competent to hold any public medical appointment who is not a legally qualified practitioner. The author of the Address handles this portion of his subject very ably; and truly we are bound to say that, like the "Phoca" in the Antiquary, the apothecary "has the best of it."

The author of the Address next proceeds to discuss the constitution of the Council of Health and Education, which he, of course, complains of as having no representative from among the great body of general practitioners. "The principle of representation," he says, "seems to be recognized in the constitution of the Council: the Crown will be represented; the Universities will be represented; the Physicians and Surgeons of England, Scotland, and Ireland will be represented; the General Practitioners alone are not represented, though they must needs have their wishes to express, and their grievances to be redressed." We have repeatedly argued for the constitution of the medical profession as made up essentially of two classes of practitioners, physicians and surgeons, or of these two blended in

the same individual, as he is in the army and navy, with whom we associate the chemist and druggist as dispenser of prescriptions. The argument of the author of this Address only gains weight from the want of incorporation of the general practitioners as a body; did they not feel themselves cut off from all connection with either of the Royal Colleges they would not complain of their non-representation in the Council of Health and Education. It seems to us, indeed, that the author of the Address does not distinguish with sufficient nicety between the general practitioner, the member of the College of Surgeons and licentiate of the Apothecaries' Society, and the simple licentiate of Apothecaries' Hall. As champion of that establishment he ought to have confined himself to its licentiates. The examining board at Apothecaries' Hall, almost to a man, are members of the Royal College of Surgeons: let them use all their efforts to secure an honourable and equal connection with that corporation, and as associates there they will be represented. Did they stoop to comply with the conditions imposed by the Council of the Royal College, and present themselves in Lincoln's Inn Fields for examination, we do not imagine that the examining board there would be hard-hearted enough to reject any of them. We should very much enjoy being present at the examination, especially if the terms could be so arranged as would permit the examiner and the candidate to propound a question turn and turn about. The surgeons would probably have the best of it in connection with the origins and insertions of muscles, but on chemistry and botany, and the materia medica, the apothecaries would almost surely come off victorious.

But still it is not, perhaps, altogether fair in the apothecaries' advocate to say that they have been wholly

and entirely forgotten in the Bill: is there not the Calvinistic remnant of the Court of Examiners of the Apothecaries' Society to be saved by being tacked on to help the College of Physicians? We have always looked on this as one of the master-strokes in the Bill. Its authors obviously thought the apothecaries, with their *present privileges*, needless; their existence, as a body, controlling the education, and testing the qualification, of the medical practitioner as an anomaly in the present day, and they have been anxious to get rid of them in the least unkind and offensive way; they have therefore done them the honour to tack them on, as we have said, to the Royal College of Physicians.

The author of the Address then proceeds to argue, that the standard of qualification of the general practitioner has been greatly elevated; that the education required of him is of the very highest kind; and that the improvement has mainly taken place under the auspices of the Court of Examiners of the Apothecaries' Society. "The College of Physicians have not hitherto felt it to be their duty to superintend the education or examination of the general practitioner, and would be ready to disclaim any share in its past control." No doubt; but the College of Physicians have had nothing to do with the education of the general practitioner—we published only last week our opinion, that we thought it matter of deep regret that the College of Physicians had not had this control all along.

The author of the Address having next shewn that the education and examination of the general practitioner is left entirely in the hands of the Colleges of Physicians and Surgeons, proceeds to argue that the public will suffer from this arrangement, on the presumption "that the class which is in possession of the fuller measure of

public confidence, on the ground of superior attainments, has a direct interest in preserving *as marked a distinction as possible* between the attainments of their own class and that of the class below them." (p. 29.)

"Now if the public at large have an interest in the class of general practitioners being as highly qualified for the discharge of their duties as the present state of medical knowledge will allow of their becoming, is it wise, is it safe, to intrust the duty of their education and examination to the exclusive direction of those whose interest lies in directly the opposite direction? Never let it be forgotten that it was with the general practitioner himself that the demand for an improved standard of professional qualification for those of his own class originated, and that it is the general practitioner who has raised that standard to what it now is. The general practitioner has a direct interest in improving the standard of qualification, and thereby extending the sphere of usefulness, and raising the professional status of his own class. The interest of the physicians as a body, is directly opposed to this improvement and elevation of the general practitioner. The difficulty this view of the subject presents to the examination of the general practitioner by the physician has been felt and acknowledged by members of that body, because it cannot fail to render the duty an invidious one, and there will always be this anomaly attending its discharge—that in proportion as the duty of giving a high qualification to the general practitioner is performed with zeal and efficiency, will the physicians be breaking down the distinction which exists between the class which they are educating and themselves—that distinction upon which their very existence, as a separate class, depends.

"Looking at the constitution of the governing body of the College of Surgeons, the same reasoning applies, and with equal force, to the share which that body is to take in the education of the general practitioner.

"But it will be said, You ought not to impute to the Colleges of Physicians and Surgeons, that in the exercise of the powers proposed to be given them by this Bill, they will be actuated by a desire to lower the standard of attainment of the general practitioners, or check their improvement as a class. We reply, that our objection to the Bill is, that it gives them the *power* of doing so."

But we must pause in our quotations and comments upon this very ably written address, by far the best examination of the Medical Bill that has yet been produced. We beg to recommend it in the strongest terms to all classes of our readers, to our country friends in especial, who, to our poor apprehension, seem to want enlightenment on the measure most wofully. They too commonly shew themselves "innocent rusticals" in their mode of looking at the measure. Let them put on the spectacles with which the Apothecaries' Society supply them in this Address, and look at the thing, narrowly, curiously, and, without thinking too much of the interests of this class or that class, of this body or that body, consider the medical profession as a whole, and ask themselves how its important functions with reference to the community at large are likely to be affected by the purposed legislation.

MOVEMENT IN THE PROFESSION.

PLEASE God, there is some prospect of calm for us again! We have notices of fewer meetings this last week than we have had for a long time. It may be that the *great* meeting of the Provincial Medical and Surgical Association, as it has been designated, has

suspended all the lesser meetings. The grand meeting took place at Derby, on the 14th—Dr. Robertson, of Northampton, in the chair; and everything seems to have gone off very amicably and well. The sense of this most respectable and numerous meeting will be completely gathered from the resolutions they passed, which we append entire. The only amendment proposed, we think, was by Mr. Martin, of Reigate, and it was in favour of the Apothecaries' Society; but it was coldly received: and though it found a seconder, not more than a single hand was held up for it when it was put from the chair. The Apothecaries' Society, we fancy, must see this as a kind of hand writing on the wall. The general practitioners, in the provinces at least, do not wish to be associated or identified with Apothecaries' Hall. The medical profession has, in fact, outlived the state of things that made this necessary. The resolutions adopted at the Derby meeting are these:—

1. "That the Association testify their satisfaction that a bill for the better regulation of Medical Education and Practice has been laid before the House of Commons, and that opportunity is afforded to the members of the medical profession for considering its provisions previous to its passing into a law."

2. "That this satisfaction is increased by observing that an approach to a uniform standard of education and qualification, and the right to practise by all qualified persons, without respect to local privileges—principles for the recognition of which the Association has on various occasions contended, and especially in petitions to the Legislature, and memorials to her Majesty's Government,—are two of the great leading principles of the measure."

3. "That further to ensure the object of a sufficient uniform primary qualification for every medical practitioner, without which the equal right to practise every department of the profession ought not to be conceded, it seems desirable that the diploma of Licentiate of Medicine should be required of all who may hereafter propose to enter the profession, and previous to their being entitled to claim admission to register in any other grade."

4. "That these principles, if carried fully into effect, would confer a great benefit on the profession and the public, in the removal of many existing evils; and that, in thus providing the public with a supply of fully qualified medical practitioners, the Association are of opinion the Government would do much towards the remedy of abuses of

which, for a long time past, there has been great reason to complain."

5. "That the Association view with alarm and deep regret that part of the bill which proposes to abolish all restriction on the practice of medicine by unqualified and unlicensed persons; and that, although there may be some reason to doubt the practicability of altogether preventing unlicensed practice by general enactment, the Association are of opinion that the illegality of such practice should be unequivocally declared, and some simple and effective means of restraint be adopted."

6. "That while the Association approve, with this exception, the general spirit and principles of the bill, they feel that in various details it may be desirable to introduce certain changes and modifications, which would improve the general efficiency of the measure, and tend materially to facilitate its practical application."

7. "That while the Association is sensible of the advantages which the profession will derive from a direct connection with the Government, they cannot but consider the proposed constitution of the 'Council of Health' as deficient, in not affording express representation, either of the physicians and surgeons resident in the provinces, or of the great body of general practitioners throughout the country."

8. "That some provision ought to be made, either in the bill, or in amended charters to be granted to the Colleges of Physicians and Surgeons, for a more direct acknowledgment of the representative system in the councils or governing bodies of these corporations."

9. "That in the absence of any provision for the admission of the general practitioners into a participation, on terms honourable to that body, in the corporate privileges of either of the Colleges of Physicians and Surgeons, it appears essential to the well-being of this numerous and influential body, as well as beneficial to the public interests, that they should be incorporated together, and that the interests of such corporation should be adequately represented in the proposed Council of Health."

On Friday last, the 15th instant, a meeting of the members of the medical profession of Maidstone and its vicinity took place, Dr. Sibbald in the chair. Resolutions were passed expressive of satisfaction that the legislature should at length have made the medical profession the subject of a special and comprehensive legislative enactment; approving of many of the provisions of the Bill, but believing that extensive modification in others will be required before it is permitted to become

law. Suggesting that the great body of general practitioners must be represented in the Council of Health. Approving the principle of a uniform and efficient course of education, and of the system of registration, but opining that it should be compulsory. And requiring "that some penal enactment of easy application, whereby summary punishment, by fine or imprisonment," may be dealt out to the unqualified should they pretend to practise physic, may be appended.

The editor of the "Maidstone and South Eastern Gazette," which has been kindly sent to us, we observe, makes the following remarks:—

"With reference to the suppression of what are called quack medicines and secret remedies, in our humble opinion this can never be done by legislation, but must be left to be dealt with by the increasing intelligence of the people."

In looking down his advertising columns in search of the medical resolutions, we were struck with the very considerable number of advertisements of quack medicines, a list of which we append as a matter of curiosity, and to enable our readers to judge for themselves whether the editor and proprietors of the Maidstone and South Eastern Gazette would be likely to relish any measure that should put an end to quackery and quack medicine-vending in every shape: here is the list in one number of the Gazette:—

1. THE HAIR.—"Rowland's Macassar," of course—but that perhaps is a cosmetic; 2. Dr. Grandison's Charity Pills; 3. Holloway's Pills; 4. Ford's Pectoral Balsam of Horehound; 5. Robinson's Patent Barley and Groats—though these perhaps are dietetic, yet are they "recommended by the Faculty." 6. Stirling's Pills; 7. The Ninth Edition: Manly Vigour, &c.; 8. The Twenty-first Thousand: Manhood, &c.; 9. The Thirteenth Edition: The Silent Friend, &c.; 10. The Cordial Balm of Syriacum; 11. Perry's Purifying Specific Pills; 12. Whooping-Cough: Farley's Never-Failing Remedy; 13. Woodhouse's Æthereal Essence of Ginger; and 14. Balsam of Spermaceti; 15. Dr. Sibly's Reanimating Solar Tincture; 16. and, lastly, Snook's Aperient Family Pills. This is pretty well, we should say, for one newspaper, and worth fifteen pounds if worth a penny.

BETHLEM HOSPITAL.

At a quarterly Court of Governors of the Royal Hospitals of Bridewell and Bethlem, held on the 18th instant, "a report from a general committee, with a scheme for regulating the admission of two pupils from the Royal Hospitals of St. Bartholomew and St. Thomas, to attend the physicians of Bethlem Hospital, when receiving and visiting the patients therein," was received and adopted.

The scheme referred to will be immediately carried into operation; and the ample wards of Bethlem Hospital will thus become not merely the means of charity to the sufferers from cerebral disease, but of instruction to successive generations of the most intelligent and zealous pupils of the two other Royal Hospitals. The sharp eyes of intelligent pupils have also an admirable effect on the way in which the medical duties of every hospital—of such an establishment as Bethlem Hospital in especial—are performed. The President of Bridewell and Bethlem Hospitals, Sir Peter Laurie, has been unwearied in his exertions to render these noble institutions all that the most enlightened philanthropy would have them, and, supported by the Treasurer, has long shewn that he had an open ear for every thing in the shape of improvement which experience could suggest. Large sums have lately been expended, are still in the course of expenditure, at Bethlem, with a view to render the house a true *curative* establishment. What a different aspect has Bethlem now to what we remember it some twenty years ago! We visited it last week, and actually saw that in the whole of the immense building there *was not a single individual under restraint!* The exception used to be, to find an individual who was not in the strait waistcoat. Well has our distinguished friend, Dr. Marx, said, and we love to quote him:—"Sympathy with man in his afflictions, the devotion which in utter unselfishness makes sacrifice of itself, never put forth fairer blossoms than do many among our present establishments for the treatment of insanity."*

* Decrease of Disease, &c. p. 16.

QUEEN'S COLLEGE, BIRMINGHAM.

THERE seems little doubt but that in this College there is already laid the foundation of a great and flourishing University. Its supporters from the very outset have been unremitting in their efforts to advance its prospects; and, so far as we know, all is done in a spirit and with a purpose that must insure the very largest ultimate measure of success. The Rev. Vaughan Thomas, in particular, has been most zealous in the cause, and, assisted by a munificent donation from Dr. Warneford, a chapel has lately been built in connection with the College, which was consecrated on the 15th instant, by the Bishop of the diocese.

The Rev. Mr. Thomas assured the large and distinguished assembly present on the occasion, that Dr. Warneford regarded the consecration of the chapel of their College as the consummation of his most anxious and pious hopes in a great and holy cause; for well might he deem that cause great and holy, which had for its object the giving the stamp of Christian character to the studies of professional youth, imparting the beauty of holiness to their lives, and making the temple of science the sanctuary of religion. Although their kind benefactor was not amongst them in person, he was present in spirit; his eye was ever on their school; his heart was with them—that heart, which ever throbbed with the pulsations of Christian love, the love of God and man, and everything that was calculated to promote the glory of his Creator, and the good of his fellow-men.

The Lord Bishop said it was his greatest pleasure, and he might at the same time say his bounden duty, to attend in all parts of his diocese, and on every occasion in which his presence might be useful in the promotion of religion or scriptural education; but more especially so amongst those who were young, and entering on the world, exposed alike to its follies and temptations.

The President said, that they would be guilty of a very manifest omission, did they separate without also tendering their grateful thanks to Mr. Sands Cox, who had laboured, he might almost say, day and night, in order to

promote the interests of the institution, and more especially in carrying out the plan for the erection of a chapel in connection with the Queen's College.

NOTE FROM SIR B. BRODIE.

To the Editor of the Medical Gazette.

SIR,

IN the leading article of the *MEDICAL GAZETTE* of Friday last I find a scheme propounded for the incorporation of the great body of general medical practitioners with the London College of Physicians, and followed by these observations:—

“The plan suggested would have this further advantage; it would not be opposed by those who have been prime movers in the construction of the Medical Bill. We threw it out to the distinguished individual who has the credit or the discredit, according to different men's views, of the projected Bill; and his reply was, ‘Let the College of Physicians take them, and welcome,’—meaning the general practitioners.”

It is evident that this refers to a conversation which I had with you on Thursday, the 7th of this month; and I have no doubt that there are few of your readers who do not understand that I am the individual alluded to.

The expression attributed to me, standing as it does alone, cannot but be regarded as offensive to two classes of persons, whom I equally esteem, and among whom I have met with some of my kindest friends, the College of Physicians and the general practitioners. But you must be aware that it was not so intended, and that it would not have been so considered by others, if the rest of our conversation had been recorded. I am willing to believe that it was only through inadvertence that you quoted any part of a conversation that was purely confidential. Having done so, however, I have a right to expect that you should go further still; and with this view I beg to remind you of what happened, so far as it concerns the remark in question.

On that day, which I have mentioned, I had an interview with you on a subject which concerned yourself.

I was influenced by no other motive than a feeling of kindness towards you, and a desire to prevent your being placed in what would have been, at any rate, a disagreeable position.

In the course of our communication you observed, speaking of the general practitioners, "They are more of physicians than of surgeons;" and you then suggested that the College of Physicians might make them an appendage of their body. I scarcely knew whether this was to be taken seriously or not, it being, indeed, plain that it would not suit the views either of one party or of the other, and I answered, carelessly enough, that "they were welcome to do so if they pleased." I said this, not having the smallest notion that it was to be put forth to the world as my grave opinion, and certainly without any kind of disrespectful feeling either to the general practitioner or the physician.—I am, sir,

Your obedient servant,

B. C. BRODIE.

14, Saville Row, Nov. 16, 1844.

[It is due to Sir Benjamin Brodie that his letter should appear in the *MEDICAL GAZETTE*, and at the same time we cannot but express our regret that any remark which he feels to have been confidential should have been inserted in our pages, and in a form not precisely as it appears to have been expressed by him at the time.—*ED. GAZ.*]

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Tuesday, November 12th, 1844.

MR. STANLEY IN THE CHAIR.

THIS was the first meeting of the session; there was a very numerous attendance of fellows and visitors. On taking the Chair, Mr. Stanley briefly addressed the assembly on the prosperous condition of the Society, and alluded to the last volume of Transactions, just published, as sustaining the character of the previous volumes. He briefly drew attention to an addition which had been made to the Library, in the busts of several of the Presidents, which were placed in appropriate positions around the room. The busts already received are those of Halford, Earle, Babington, Cline, Abernethy, Brodie, and Travers.

Case of Ulceration of the Duodenum, in which the gall-bladder was filled with a

colourless aqueous fluid, and contained numerous gall-stones. By C. J. ROBERTS, M.D., Physician to the Welsh Charity, &c.

THE author only saw this case a short time previous to death. The patient was attacked with violent vomiting on Tuesday evening, which resisted all the means employed to subdue it, and he sank on the following Thursday, at two o'clock, P. M. On examination after death, the intestines were very slightly glued together by lymph. The inner membrane of the stomach had many ecchymotic spots on it of a very deep colour. The duodenum was ulcerated through its entire length; the liver small, but healthy; the gall bladder was distended, and at its apex there was a small vesicle more translucent than the other portions of the bladder, looking as if from a rent of the two outer coats, and a protrusion of the inner one. On opening it, more than 4 oz. of a perfectly limpid transparent fluid escaped, but unfortunately none of it could be collected for examination. There were more than a hundred gall stones in the gall bladder, about the size of peas. The kidneys and bladders were healthy.

The author remarks that cases where a number of gall stones have been found after death, without their presence causing irritation, or being suspected, are not rare; but that the total absence of bile, or rather its place being supplied by an aqueous fluid, are not common. He observes, however, that allusions are made to it by some of the older authors, as Fernelius and Haller, and also that mention is made of an altered condition of the biliary secretion, by Andral, and by Drs. Graves and Stokes, as well as by Dr. Thomson, in his Practical Treatise on Diseases of the Liver.

He concludes by observing that the most extraordinary part of the case is, the fact that the man never made any complaint of hepatic derangement during life-time. He was never jaundiced, nor had pain in the right side, notwithstanding one of the calculi was firmly grasped by the duct.

Case in which the Vena Cava Inferior was obstructed from the commencement of the common iliac veins, and its cavity obliterated between the entrance of the emulgent and hepatic veins. By THOS. BEVILL PEACOCK, M.D.

THIS was a case of complete obstruction of the inferior cava, from the uterine and common iliac veins to the entrance of those from the liver. The obstruction in the former vessels, and the inferior portion of the cava, was the result of the adherent masses of pale lymph, while above, the ves-

sel was converted into a ligamentous cord. The right kidney was in an advanced stage of granular degeneration, the left completely atrophied; the liver was also of small size. The author considered the disease of the vein to have been wholly unconnected with the death of the patient, and ascribed the general dropsy under which she laboured during the last period of her life, to the condition of the kidney and liver. The circulation had been maintained by means of the branches of the vena azygos. The author was of opinion that the adhesions of the uterus to the adjacent organs, and the appearances of the veins, as exhibited in the preparations shewn to the Society, were conclusive of the dependence of the obstruction in the vein on inflammation of the vascular tunics.

Mr. Stanley pointed out the features of interest in Dr. Peacock's paper; viz., the obliteration of the inferior vena cava, and the substitution of a collateral circulation by means of a great enlargement in the vena azygos, without any perceptible increase in size of the superficial abdominal veins.

Dr. Budd remarked that although we were well acquainted with the effects of adhesive phlebitis when occurring in the veins of the extremities, we had not sufficiently attended to the influence of this disease in producing atrophy of the glandular organs. The paper before the Society seemed to him to bear on this subject. He (Dr. Budd) had seen instances in which both the liver and kidney had become atrophied to a great extent from the presence of adhesive phlebitis in the portal and renal veins. He had seen the liver so atrophied as to be indented with deep fissures, and on examination it was found that the branches of the portal veins supplying the atrophied parts were completely obliterated, as the result of phlebitis. He had seen the same effects in the kidney from a like cause.

Mr. Stanley referred to two cases of adhesive phlebitis, which occurred in St. Bartholomew's Hospital: in one, the popliteal vein, in the other, the veins of the arm, were affected with phlebitis, as was evidenced by all the signs and symptoms of that disease; and yet after a time the circulation in the affected veins was completely restored. He inquired if any member present had seen similar cases?

Dr. J. C. B. Williams considered that the pathology of the veins was not sufficiently understood. He took occasion to refer with commendation to Mr. Paget's Paper, published some time since, on this branch of pathology, and related a case in illustration. It was an instance in which disease of the veins existed at the same time with disease of the lung. The physical

signs were those of pleuro-pneumonia affecting two-thirds of one lung. The symptoms, however, were too severe to be explained simply by this condition, for not only was there extreme difficulty and obstruction in the breathing, but the countenance was remarkably livid, and the œdema of lower extremities rapidly supervened. The patient died, and on examination two lobes of the right lung were in a state of complete carnification, and on being divided by the knife were found to be very red in the interior. The pulmonary veins were much enlarged, and were found to be obstructed by the adherence of large clots to the lining membrane. The vena cava ascendens, and other important veins in the body, were affected in a similar manner, and yet there was no evidence whatever of any recent inflammatory action; on the contrary, the lining membrane was paler and softer than usual, and contained patches of atheromatous deposit. This fact, taken in connection with others of a somewhat similar kind, had led him to consider that many cases supposed to be phlebitis were not so in reality, but that the symptoms presented to us depended on an adherence of the fibrine of the blood, or of coagula, to the coats of vessels, which by the influence of previous disease had become roughened. If we reasoned by analogy, there was good ground to suppose the doctrine correct, for it was well known that the lining membrane of arteries became altered by old age, or some other cause, totally independent of inflammation.

Mr. Fergusson had met with two cases of obstruction in the venæ cavæ, one of the superior, the other of the inferior vein. The first case occurred in a subject in the dissecting-room, and in this instance the collateral circulation had been carried on by the vena azygos greatly enlarged, assisted by the branches which communicate with it. This case bore out the description given by Dr. Peacock in his case, as to the influence of the azygos vein in carrying on the circulation. In the second of these cases, the patient had died three weeks after giving birth to a child, and although she was attended by observant and skilful practitioners, no idea had been entertained by them of the true nature of the case; neither, indeed, were there any symptoms to guide them to an accurate diagnosis. On examination after death, nothing at first was discovered to explain the fatal result. The parts in the neighbourhood of the spine were subsequently examined, and it was then found that the inferior cava was completely blocked up with lymph; it also contained pus in its interior, and there was pus also on its outer surface.

• With respect to Mr. Stanley's inquiry, the speaker referred to cases in which varicose

veins of the lower extremities had been attempted to be obliterated by the passage of needles under, and string over them. In many cases there was every indication of inflammation having been established; yet, after the expiration of ten, twenty, or forty days, the blood commenced to flow again through these vessels. Cases of the kind were not uncommon, and had probably been seen by many present. These cases had led him to believe, contrary to the common opinion, that adhesive inflammation of the lining membrane of veins was by no means an usual occurrence, nor easily set up.

Dr. Peacock did not agree with Dr. Budd, with respect to the influence of adhesive inflammation on the atrophy of the glandular organs. In his own case he felt convinced that the glandular disease had preceded that in the veins. Besides, the liver in this instance was atrophied, whilst the portal venous system was healthy. The atrophy of the kidney of one side depended on granular degeneration, and the enlargement of the other had its origin in the same disease in a less advanced stage. He considered, in his case, that there were unequivocal proofs that the morbid appearances in the veins were the result of adhesive phlebitis.

Mr. Snow referred the origin of the adhesive phlebitis in Dr. Peacock's case to inflammation of the uterus, in which the veins of that organ had become involved, the disease consequently spreading to the larger vessels. The state of the uterus and its morbid adhesions proved that inflammation had existed in it at some some previous time. Mr. Fergusson's last case illustrated the same point.

On the Classification, Structure, and Development of the Echinococcus Hominis; showing reasons for regarding it as a species of Cysticercus. By ERASMUS WILSON, Esq. Consulting Surgeon to the St. Pancras Infirmary; Lecturer on Anatomy and Physiology in the Middlesex Hospital.

The author agrees in the opinion, now become general, of the universality of this curious entozoon in the sacs of the common acephalocyst, but differs with all preceding writers in regarding it as a fixed or pedunculate animal, in its perfect state, as well as in its undeveloped form. The cases in which it was observed were the common hydatid tumor of the liver; the little animal measures in its longest diameter from $\frac{1}{20}$ to $\frac{1}{12}$ of an inch in diameter, is scarcely distinguishable by the naked eye, and is enclosed in clusters of from two to one hundred in a proper membrane, which is developed from and attached by a point to the internal membrane of the acephalocyst. To give an idea of the number of echinococci con-

tained within an hydatid tumor, the author counted their number in an acephalocyst of about the size of a hazel nut. In this small cyst he found forty clusters, several of which contained eighty individuals, and the entire number of separate echinococci was about one thousand. The animal is found in two states, namely, a contracted and an elongated state; in the latter there is perceived a circle of hooklets at the cephalic extremity, with four suckorial processes; then follows a cyst-like body or caudal portion, into which the cephalic portion is drawn in the contracted state, and at the caudal extremity is the peduncle. After giving a minute description of the structure of the animal, the author proceeds to describe the changes which take place in the creature after death, and gives a full account of the progressive stages of its development. The author considers the offices of the hooklets and suckorial processes to be involved in obscurity, the creatures having neither mouth, nor organs of progression. The identity of structure of the echinococcus with the cysticercus, he considers to be complete, and proposes for it the name of *cysticercus pedunculatus*. The paper was accompanied by upwards of forty well executed figures, drawn to a scale.

Dr. Budd bore out the accuracy of Mr. Wilson's description of the echinococcus, having had repeated opportunities of examining this animalcule in the hydatid cysts of sheep and man. The more curious circumstance relating to this minute being, was the discovery of M. Livois, that it was a mere parasite, but that it was invariably found in hydatid cysts, and that it was, moreover, the cause of these cysts. M. Livois had founded this opinion on the examination of a very large number of cases. With the view of testing this opinion, Dr. Budd had examined seven hydatid tumors, which had been for many years in the museum at King's College. In some of these he experienced difficulty in discovering the animalcule, but succeeded in finding the teeth, which appeared to be the last part of the creature liable to decay. In two cases no trace of the echinococcus could be found, but this was explained in the one instance by the circumstance of the hydatid cyst having been expectorated and burst, and its contents escaping; and in the other, by the cyst having been everted and the echinococci washed away. It was a curious circumstance, that the echinococci were precisely the same in the hydatid cysts in man and animals, although the cysts themselves in these two existed under such different circumstances.

PHYSICAL SOCIETY OF GUY'S HOSPITAL.

BRANSBY B. COOPER, Esq. in the Chair.

November 16, 1844.

A LARGE meeting of this Society was occupied in hearing and discussing a paper read by Dr. Barlow, in which he gave a connected description of the views entertained by himself, and which he has previously put forth, in reference to the depuration of the blood. This depuration, he conceives, is wholly effected by the two-fold agency of air and water. The atmospheric air acting through the medium of the pulmonary circulation, removes, in the form of carbonic acid, the carbon which has been formed in the capillaries of the aortic circulation, and which would act as a poison if returned to the left side of the heart, and was again transmitted through the system. The water acts through the medium of the portal circulation, by the capillaries of which it is taken up from the stomach and small intestine, and is employed for the purpose of holding in solution the solid contents of the bile, the urine, and the perspiration, preparatory to their elimination by respective secreting organs, and without which these solid contents cannot be separated from the body, unless they are brought to the emunctories in a state of solution.

These views were lucidly stated and supported, by references to the symptoms, pathology, and effects of remedies employed in cardiac, hepatic, and renal disease, and also to dropsical effusion in the peritoneum, and to the symptoms and state of the blood in Asiatic cholera; Dr. Barlow dwelling particularly on the impossibility of procuring diuresis when disease of the liver had proceeded so far as to materially obstruct the entrance of water from the small intestine into the portal circulation.

A pretty active discussion ensued, in which Drs. Birkett, Brereton, Addison, Hughes, and Mr. Hilton, took part. Dr. Birkett could not entirely adopt opinions which made secretion entirely depend on the quantity of water present or imbibed into the system. Dr. Brereton and Dr. Hughes criticised the cases brought forward in support, and also the facts adduced from the cholera, and thought they were insufficient to establish the theories advanced. Dr. Addison eulogised the paper, and felt generally disposed to concur in its conclusions, but saw difficulties in the explanation offered of the phenomena of the renal secretion in hepatic disease. For instance, the urine in the hobnail liver disease was small in quantity, but normal in the proportion of its constituents, while the urine in active congestion and enlargement of the liver was not only in small quantity, but also over-

charged with solid matter. The obstruction to the entrance of water through the portal system was equal in both cases, and yet the result on the renal function was different. Could this be explained?

Mr. Hilton thought Dr. Barlow had entirely overlooked the entrance of fluid into the system by the absorbent system—a channel as important as that of the portal system. The President inquired of Mr. Hilton whether in the course of his inquiries he had been able to connect any particular symptoms with the inter-lobular, or intra-lobular forms of venous congestion of the liver, so as to aid their diagnosis during life, and was answered in the negative.

After the customary vote of thanks to the author, he adjourned the meeting, and announced a case of subclavian aneurism by Mr. —, as the subject for the next discussion.

LUMBAR ENTEROTOMY,

WITHOUT OPENING THE PERITONEUM, PERFORMED WITH SUCCESS UPON A WOMAN, AGED 53.

By J. S. AMUSSAT.

MADAME B —, 53 years of age, of sound constitution, had enjoyed good health habitually until within the last four months, when she began to be troubled with obstinate constipation, and occasionally to suffer severe cholicky pains. Two months back, these pains became still more severe and frequent, and the fæces passed, with the assistance of injections, were slender, flattened, ribbon-like, and surrounded with mucus and blood; discharges from the bowels became more and more difficult; clysters began to fail in their effect, and the patient was compelled to have recourse to castor oil, aloetic pills, &c. From the 12th of June there was no longer any evacuation from the bowels, nor any expulsion of flatus, in spite of castor oil, croton oil, purgative clysters, &c. The belly became distended and tympanitic, and vomiting was superadded to the other symptoms; there had been complete constipation for a fortnight before I was called into consultation with Dr. Seddillot and M. Marjolin, who had done everything that art suggested, and had already thought of having recourse to an operation. The belly was now distended with flatus, and generally tympanitic; no tumor could be discovered by palpating; the finger in the rectum met with no obstruction. On the 27th of June the patient was no better; nothing had passed from the bowels. 28th, same state; the abdomen, measured round the umbilicus, was upwards of 32 inches and a half in circumference. The establishment of an artificial anus seemed every way indicated if the patient was to have a chance for her life; but entirely ignorant of the seat of obstruction, we knew not how to

proceed. Were we to open the colon in the left lumbar region, or were we to proceed to the same operation on the right side? The history of the patient led us to conclude that we had not to do with any acute stricture of the bowel, nor with one situated at any great distance above the rectum. It is also well known that organic diseases of the great intestine, causing tympanitis and retention of the fæces, are commonly situated at the point where the sigmoid flexure of the colon ends in the rectum. We entertained the hope that the seat of the obstruction might be there. We had but one means of guessing at, or approximating to the fact, however, which was, by measuring the quantity of fluid that could be introduced in the way of lavement. On making this experiment, it was found that the patient received and retained readily the whole of an ordinary syringe, and one-third of a syringeful of injection; more than this could not be forced into the bowel: the obstruction could not be seated very high, therefore.

30th.—Same state.

July 1st.—In consultation with Sir Philip Crampton, of Dublin, who happened to be upon a visit to Paris, and several distinguished French practitioners, Sir Philip, upon the invitation of his French medical colleagues, gave it as his opinion that if the operation for artificial anus was performed, it ought to be done without loss of time; his own personal experience did not allow him to decide upon the value of the measure, but he was inclined to approve of it from the cases which M. Amussat had published. All things considered, then, the propriety of the operation decided on, M. Amussat determined to perform it on the left side.

Having marked with ink the space bounded by the os ilium below, by the edge of the first false rib above, and by the edge of the common mass of the sacro-lumbar and long dorsal muscles behind, I made, says M. Amussat, a transverse incision in the middle of this space, between three or four inches in length, and which I gradually deepened until I had reached the aponeurosis of the transversalis. Three small arteries, divided in this first stage of the operation, were twisted; I then cautiously divided the aponeurosis mentioned; immediately a large pellet or mass of fat escaped by the opening made, upon cutting through which I saw a portion of the intestine, red, and tense. To ascertain whether or not this portion of the intestine belonged to the colon, which it was my purpose to open, I carefully explored the parts, and came to the conclusion that it must be part of the colon, inasmuch as the quadratus lumborum, which was exposed on its outer edge, shewed the relations with the bowel which we know to be natural. I therefore determined to transfix the portion of bowel in question, with a curved needle

duly armed with a waxed thread behind the point at which I believed the peritoneum to terminate. I then fixed a tenaculum in the intestine, and with a pair of curved scissors divided the intestine between the tenaculum and the thread. Immediately there was a rush of gas from the bowel, and soon afterwards an escape of yellow feculent matter. Having now attained the object which I had proposed, I enlarged the opening by means of the scissors without any fear, and gave free vent to the gas and fæces. The patient immediately felt great relief from the evacuation. To terminate the operation, which had succeeded thus far beyond my utmost hopes, and was much more easily executed than I could have anticipated, I fixed the intestine to the skin anteriorly by means of three points of uninterrupted suture. An injection thrown in by the artificial opening facilitated the escape of feculent matter. The operation was admirably borne by the patient. Put to bed when she had been cleaned, her pulse was neither stronger nor weaker, quicker nor slower, than it was before having been placed upon the table.

Evening.—No sickness; perfect calm; abundant escape of fæces by the wound. Next morning, pulse 80-85; and several hours sleep, which the patient had not had for ten or twelve days, refreshed her greatly.

July 3d.—All going on well; on the 4th, escape of flatus per anum, and on the 6th and following days, not only of flatus but of fæces, in small quantity, however, not sufficient to encourage the hope that the natural passage would be restored. A month after the operation, the wound is cicatrized; the artificial anus is kept plugged with a mass of wax, and the state of the patient leaves no solicitude in regard to her permanent recovery: there is no indication of organic disease that can bring her life into jeopardy.—*Gazette Medicale de Paris*, Aug. 10, 1844.

[We have given the case as reported, and with the original title; but, as we understand it, the intestine was entered not behind the peritoneum, but through it; M. Amussat was in doubt whether the red, distended piece of intestine that presented itself at the wound was the colon or small intestine, which he would never have been had he known himself without the peritoneal cavity in the situation where he was cutting.—ED.]

ACTION OF THE HEART.

THE frequency of the heart's movements during convalescence from continued fever, and their gradual abatement under the influence of a nourishing diet, are constant and generally admitted facts. Physiologists, however, are not agreed upon their cause; according to some, the heart only continues

to obey habits contracted during the course of the fever, which wear out as convalescence advances. According to others, who consider every febrile movement to be accompanied by a certain degree of irritation of the internal membrane of the heart—a shade of endocarditis—the frequency of the pulse depends on the persistence of that modification after the removal of the causes which gave rise to it. I have some difficulty in admitting either of these theories; the first appears to be contradicted by the rapidity with which all the other functions are re-established with the commencement of true convalescence; and as regards the second, if the internal membrane of the heart retained the irritation, after the subsidence of the fever, it ought to be increased rather than diminished by the contact of blood richer each day in stimulating materials; and if the frequency of the pulse were an indication of that state of irritation, it should increase instead of diminishing, when we give nourishment.

The following appears to me a more correct explanation. As soon as the febrile orgasm subsides, and the functions resume their regular exercise, the want of nourishment is felt in all parts of the system; this is evidenced by the rapidity with which the nutritive materials in reserve in the adipose tissue are absorbed, giving rise to that rapid emaciation which we see constantly take place in the first days of convalescence. All the tissues now demand at once the supply of blood necessary for their reparation; and being unable to obtain it, either because the mass of blood is absolutely diminished, or, being altered in its composition, has become inadequate to the reparation, the movements of the heart are accelerated, so as to make up by the frequency of the supply what is wanting in the abundance. The more, therefore, the quantity of blood is increased, and the more its quality is improved by the introduction and elaboration in the alimentary canal of nutritious materials, the more do the heart's movements abate. In like manner, after abundant hæmorrhages, we see the circulation at first become accelerated without fever actually existing, or having existed, and diminish in frequency when the mass of the blood has increased, or regained its normal composition.—Dr. FALLOT, in *Annales Médicales Belges*, 1843.

CASE OF INJURY OF THE HEAD.

On the 10th of January, I was called to a man, about 25 years of age, whom I found surrounded by a crowd of curious people, who partly gave utterance to feelings of pity, and partly believing him mad, were making various preparations to restrain him. He had shortly before been knocked down by an oaken plank, 8 feet long, and 3 feet

thick, which had fallen from a height of 18 feet upon his head. On examining the skull, which I did with great difficulty, in consequence of his opposition, I found a depression $2\frac{1}{2}$ inches long, by $1\frac{1}{2}$ inch broad, and $\frac{5}{16}$ ths of an inch deep, in the situation of the anterior and superior angle of the right parietal bone. There was no other external injury. The look of the patient was furious, his eyes rolled in his head, and he frequently gnashed his teeth; on his face evidences of bleeding from the nose were apparent; nothing else unusual. The pulse was small, depressed, and so slow that it scarcely beat 60 strokes in a minute. To questions the patient only answered by nodding or shaking his head, and by gestures pointing to his tongue, his neck, and his windpipe, that he had lost the power of speech. His walk was so insecure, that he had to support himself by the furniture in the room. He resolutely opposed my preparations to bleed him, drew the form of a leech upon the table with his finger, held up four fingers to indicate the number four, and pointing to the wounded head, indicated that he wished to have them applied there. It cost me great trouble to make him comprehend the greater usefulness of venesection in such circumstances. He made me understand by signs that I should take no more blood from him than a single cupful; when this quantity had flowed, he became impatient, and insisted upon having the arm bound up; I, on my part, wishing to get away a larger quantity of blood, felt the pulse, and used other pretexts to let a larger quantity flow; the by-standers also came to the patient's assistance, and insisted upon my tying up his arm. In my disputes, first with the patient and then with his friends, from twelve to sixteen ounces of blood might have flowed, when the patient suddenly exclaimed "now tie up my arm." This excited great astonishment among the spectators, and I was compelled to yield to his desire, although the frequency and the fullness which the pulse now shewed would have led me to leave the vein open for some time longer. The arm was tied up, and the patient put to bed, having a poultice of cold vinegar and water applied to the part injured, and an aperient mixture of arnica flowers, senna leaves, and sulphate of magnesia, prescribed for him every hour, until free discharges from the bowels should follow. In the evening the bowels had been moved twice; the pulse was free and large, and of proper frequency; the patient only complained of some lassitude, but the speech was slow and halted when he got at all excited. He had some sleep in the day; the wounded part was hot and moderately painful. Next day, the patient was up,—I found him standing by the stove making his poultice. He now questioned the fact of any depres-

sion of the skull—he was only aware of some swelling—and showed great disposition to go to work. On the 15th, indeed, in spite of all my dissuasions, he went to work, and has continued very well ever since, although he cannot now get a few feet above the surface of the ground without feeling giddy. By and by, he discovered that the skull was actually depressed in the situation indicated.

He says that he felt himself knocked down by the falling plank, but that he immediately rose again possessed of complete consciousness, and had gone on about five paces, when he fell a second time senseless, nor did he recover himself again until he found himself at home. His anger had been excited by feeling himself without the power of speaking, and the disposition in the by-standers to treat him like a madman: he had a feeling of constriction and stiffness, which extended over the lower jaw, the tongue, and the neck down to the breast; the tongue appeared to have become motionless by its weight and thickness, so that speech would not follow the strongest behests of the will.

This feeling had gradually become less and less during the blood-letting, and with its entire removal he found that he had recovered his power of articulating. — PATZE, in *Casper's Wochenschrift*, No. 30, 1844.

SECOND EXAMINATION FOR THE DEGREE OF B.M.—1844.

First Division.

W. H. Allchin, University College.
H. Browne, King's College.
W. T. Edwards, University College.
J. Evans, University College.
R. D. Harling, University College.
E. Hearne, University College.
W. B. Herapath, Bristol Med. School and London Hospital.
B. L. Jemmett, King's College.
F. W. Marshall, University College.
N. Parker, London Hospital.
W. H. Parsey, King's College.
P. Redfern, 1, Surgeon's Sq. Edinburgh.
C. H. F. Routh, University College.
G. W. Timms, University College.
H. M. Webb, Guy's Hospital.

Second Division.

J. H. Blount, King's College.
H. M. Cannon, King's College.
R. Haines, St. Thomas's Hospital.
P. Martyn, School of Physic in Ireland.
J. Scofield, Aldersgate.

ROYAL COLLEGE OF SURGEONS, OF ENGLAND.

Gentlemen admitted Members on Friday, Nov. 15.—H. Browne.—J. C. Forster.—T. R. Trayer.—W. B. Ferguson.—J. P. Ramskill.—J. Johnston.—S. S. Brame.—H. E. Cullen.—S. Mossop.—E. H. Vincen.—R. Mannix.—J. Squire.

APOTHECARIES' HALL.

Gentlemen who have obtained Certificates, Nov. 14.—J. C. Forster, London.—T. Evans.—W. Collyns.

MORTALITY OF THE METROPOLIS.

Deaths from all causes registered in the week ending Saturday, Nov. 9.

ALL CAUSES	989
SPECIFIED CAUSES	988
I.—Zymotic (Epidemic, Endemic, and Contagious) Diseases, 214; among which, of—	
Small Pox	42
Measles	22
Scarlatina	70
Hooping Cough	22
Croup	2
Thrush	0
Diarrhoea	11
Dysentery	4
Cholera	0
Influenza	4
Typhus	32
II.—Dropsy, Cancer, and other Diseases of uncertain or variable Seat 124; among which, of—	
Inflammation	1
Dropsy	16
Scrofula	4
Cancer	9
Atrophy	10
Debility	26
Sudden Deaths	11
III.—Diseases of the Brain, Spinal Marrow, Nerves, and Senses, 147; among which, of—	
Hydrocephalus	26
Apoplexy	25
Paralysis	18
Convulsions	51
Insanity	0
Delirium Tremens	2
IV.—Diseases of the Lungs, and of the other Organs of Respiration, 314; among which, of	
Pneumoni	110
Hydrothorax	7
Asthma	19
Phthisis or Consumption	119
Diseases of the Lungs, &c.	30
V.—Diseases of Heart and Blood-vessels	32
VI.—Diseases of the Stomach, Liver, and other Organs of Digestion, 59; among which, of—	
Teething	12
Gastritis	0
Enteritis	17
Tubes	4
Hernia	1
Disease of Stomach, &c.	3
Disease of Liver, &c.	9
VII.—Diseases of the Kidneys, &c.	9
VIII.—Childbirth, Diseases of the Uterus, &c. 11; among which, of—	
Childbirth	8
Disease of Uterus	2
IX.—Rheumatism, Diseases of the Bones, Joints, &c.	14
X.—Diseases of Skin, Cellular Tissue, &c.	2
XI.—Old Age	61
XII.—Violence, Privation, Cold, and Intemperance	30

NOTICE.—It was our intention to give Dr. Guy's remarks on our review of his *Principles of Forensic Medicine* in the present No., but its length has compelled us to postpone it until next week.

WILSON & OGILBY, 57, Skinner Street, London.

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SUBSTANCE
OF
CLINICAL LECTURES

DELIVERED BY MR. STANLEY,

*At St. Bartholomew's Hospital, during the
Summer Session, 1844.*

THERE are at the present time, in my accident wards, twenty-one cases of fracture, and three of dislocation, out of which I shall select some points for consideration, respecting the diagnosis and treatment of these injuries.

Diagnosis of fracture.—In certain cases wherein the occurrence of fracture is not plainly indicated by the mobility or distortion of the part, or by the existence of crepitus, there is one strongly presumptive sign of it, the attention to which has often helped us in doubtful cases, especially in the instances of fracture of the lower end of the tibia and fibula, also of the head of the tibia; this sign is, an acute tenderness of the periosteum manifested in handling the part, combined with deep-seated oedema from serous effusion into the cellular tissue around the periosteum. An experienced hand and eye will readily distinguish these circumstances characteristic of fracture, from the general swelling and tenderness of the soft parts, the result of simple contusion. A man at the present time in the hospital was admitted shortly after he had slipped down in the street; there was no distortion of the leg, and no yielding or crepitus could anywhere be detected; but such was the acuteness of the pain occasioned by pressure of the lower part of the tibia, with the evidence, besides, of the deep oedematous swelling over this part of the bone, that the fracture of it was suspected; and accordingly the limb was confined in splints. Ten days afterwards, an oblique ridge on the lower and front part of the tibia shewed that the

bone was broken, and that the diagnostic sign of the fracture had been of some value in determining the treatment. Crepitus is frequently but a doubtful sign of fracture, especially in the injuries of bones near their articular ends; here it may be caused by an alteration of the synovia within the sheaths of the surrounding tendons, or within the contiguous joint; and, in injuries of the hip or shoulder, when the displaced head of the femur or humerus lies in contact with a surface of bone beyond the articular cavity, in moving the limb a grating sensation may then be communicated to the fingers, so closely allied to that of fracture, as to be with difficulty distinguishable from it. In the shoulder, for instance, when the head of the humerus is driven between the subscapularis muscle and the scapula, the movements of the arm will communicate to the hand of the surgeon a grating sensation, not distinguishable from the crepitus of fracture. As it concerns the diagnosis of fracture, it must be borne in mind, that by the operation of the force which has broken a bone, its ends may get so firmly impacted together, as not to be separable without violence; hence it has happened that a man with both bones of his leg broken has been able to bear considerable weight on the limb. I had a patient whose tibia and fibula were broken about their middle, by the kick of a horse; yet he contrived, with the help of a stick, to walk from Highgate to the hospital, a distance of between four and five miles. Under circumstances of doubt, assistance in the diagnosis may be obtained by ascertaining in what manner the accident occurred; and here it is to be recollected, that a shock imparted to the distant part of a limb may cause the fracture of the shaft of the femur or tibia. A man had just raised a sheep-hurdle from the ground, and was holding it in his hands, when a gust of wind turned him round with the hurdle; the great toe of his left foot coming against a stone, he immediately felt and heard his leg break;

his wife, and another man standing by, also heard the crack. He was directly brought to the hospital, and the tibia was found broken in two places, transversely through its middle, and obliquely through its lower third. Also, on occasions when it would not be expected, an inordinate or spasmodic action of the muscles surrounding a bone may cause its fracture. A coachman, in descending from his seat, felt a sudden twist in his limb; and from that instant he was unable to bear weight on it; he contrived to reach the ground on his other leg without falling, and was directly brought to the hospital, when there was ascertained to be a fracture of the shaft of the femur, just below the trochanters.

Adjustment of fractures.—For this object, in many instances, nothing more is required than that the limb should be placed in an easy posture; directly this is done, the ends of the bone adjust themselves perfectly well. And I have learned by experience, that when one fair effort, by extension of the limb and manipulation of the broken bone, has failed to effect the adjustment of its ends, there is but little probability of success from a repetition of the same proceedings, to which the obvious objections are, the severe pain they occasion, and the injury they do to the surrounding soft parts. When one well-directed effort by extension of the limb and manipulation of the broken bone has failed to effect its adjustment, we must trust to the chance of its adjusting itself; and if it does not do so, we may assume the existence of one or other of the following obstacles to adjustment, over which extension of the limb, or other proceeding we may adopt, can have but little influence,—that the displaced ends of the bone have become firmly impacted together; or that the bone having been broken in two places, and the middle piece displaced, upon which the extension of the limb has no effect; or that a displaced tendon or muscle has got between the ends of the bone; or that one end of the bone has been driven into, and has become firmly impacted in the substance of an adjacent muscle; or that the muscles on one side of the limb having been lacerated, the muscles on the opposite side, their antagonists, acting inordinately upon the broken bone, have displaced it. Of these occurrences the following are examples, mostly of recent occurrence in the hospital.

Fractured ends of the bone impacted together the obstacle to adjustment.—A man suffered a fracture in the middle of his tibia. The ends of the bone projected forwards to the extent of forming an obtuse angle; and they were so firmly fixed in this position, that repeated and forcible extension of the limb, combined with firm pressure against the broken bone, had not the slightest effect

on it. Its ends were necessarily left projecting, and union of the fracture took place in the usual time, but with an awkward-looking bump on the front of the leg. Here the obstacle to adjustment could have been none other than that the ends of the bone were firmly impacted together; and I am sure they could not have been separated by justifiable force. It may be also well to remark, that this peculiar condition of a simple fracture of the tibia occurred in a man 40 years of age, from slipping down on his side, without direct violence to the leg, and that the fibula was uninjured.

A man, aged 74, was admitted with a simple fracture of the tibia, a little above the ankle, produced by the passage of a cart wheel over the limb. An inch above the malleolus internus the edge of the upper portion of the tibia projected, and the skin was tightly stretched over it. Many ineffectual attempts were made to restore the bone into its place. On the seventh day he was attacked by delirium, and on the tenth day he died. On examining the limb, I found a fracture extending obliquely through the shaft of the tibia, an inch and a half above the ankle; also through the malleolus internus, and through the shaft of the fibula. Even after the lines of fracture were brought into view by the reflection of the soft parts, not without considerable force could the bones be adjusted, on account of the firmness with which their fractured surfaces were impacted together.

Fracture of a bone in two places the obstacle to adjustment.—A man in a state of intoxication was kicked out of a public-house, and directly afterwards brought to the hospital with a fracture of the tibia and fibula, and the soft parts around were severely contused from the blows they had received; the consequences of which were, extensive ecchymoses, vesications, suppuration through the subcutaneous cellular tissue, and sloughing of the integuments over the fracture. The end of the upper portion of the tibia projected, with considerable shortening of the limb. Repeated efforts were made to obtain a better adjustment of the fracture, but to no purpose. The projecting end of the tibia was necessarily left sticking in the soft parts on the inside of the leg, for from this position it could not be stirred. The man died under circumstances which will be hereafter noticed; and on examining the limb, the tibia was found fractured in two places, about two inches above the ankle, and at the junction of its upper and middle third. The middle piece of bone, about six inches long, was also split vertically; its upper end projecting against the superior portion of the tibia, prevented this falling into its place. It was evident that no extension, or other manipulation of the

limb, could have effected the adjustment of this fracture.

Displacement of a tendon or muscle the obstacle to adjustment.—Such occurrence is most likely to happen in cases of fracture of the lower end of the tibia and fibula, with dislocation of the ankle-joint. In the examination of one of these cases, in which many attempts had been ineffectually made to reduce the dislocation, the tendons of the tibialis posticus and flexor longus digitorum were found firmly locked between the tibia and fibula, and had thereby prevented the replacement of the articular end of the tibia in its right situation.

End of the bone impacted in the substance of an adjacent muscle the obstacle to adjustment.—This occurrence was strikingly presented to my notice many years ago, in two cases under the care of Mr. Abernethy, wherein the shaft of the humerus had been fractured at about the junction of its upper and middle third, and the end of the lower portion of the bone was driven through the deltoid muscle and skin covering it. No forcible attempt was made to withdraw the end of the bone from the substance of the muscle, in which it was firmly impacted. The result of each case was, that not more than the ordinary amount of irritation ensued; and with the exfoliation of the exposed end of the bone, the fracture united in the usual period, and without deformity. The harmlessness of the end of a bone sticking in the substance of muscle, and the little interference of such occurrence with the reparative processes, were well shewn in these cases. Under such circumstances there must have been either the absorption of the muscle intervening between the two portions of bone, or the gradual loosening and withdrawing of the end of the bone from the muscle into which it had been driven.

A few months ago I had in the hospital a boy nine years of age, who had suffered a complicate fracture of the lower part of the femur. The knee-joint became, in consequence, fixed in the extended position, and the end of the shaft of the femur was found projecting in the lower and outer part of the ham. Repeated and powerful efforts by extension, and various movements of the limb, were made to replace the projecting end of the bone in its right situation, and to restore the motions of the knee-joint; but these efforts were of no avail. The injured parts became firmly consolidated; and when the thickening around them had disappeared, it became evident that there had been a transverse fracture of the femur, just above the condyles, and a vertical fracture between them; and that the end of the shaft of the bone had been driven through the biceps muscle. Ultimately the limb became

firm, and the knee-joint regained a considerable degree of motion.

The foregoing is a good example of a class of cases of complicate fracture, wherein the utmost efforts to replace the parts in their natural position are of no avail, and consequently we have but to await the natural processes of reparation: nor can I omit the remark so frequently suggested by the progress and result of these cases, that when the mischief has not been aggravated by undue surgical interference, they turn out so much more favourably than was anticipated from the formidable character which the injury on its first view presented.

There is always, as it has appeared to me, an interest in knowing the method of occurrence of a complicate injury. In the case just related, the fracture with displacement of the lower part of the femur occurred to a boy in falling from a cart, between the rails of which, his foot being caught, his body became suspended by it; there were no marks of direct violence to the knee, and accordingly it was assumed that the injury had been produced by the twist which the limb received on his body being suspended by it. An increased breadth of the joint, and the loss of the natural prominence of the patella, were the consequences of the vertical fracture between the condyles, permitting their separation and the sinking of the patella between them; there was also a considerable hollow in the front of the thigh just above the condyles, the consequence of the transverse fracture of the femur and displacement of the end of the bone. By the side of the foregoing case the following extract from the *Archives Gén. de Méd.* vol. ix. p. 267, will be regarded with interest. A boy, aged 11, twisted his leg in a hole in such a manner that whilst his body turned round, his leg was fixed. The femur was thus separated from the condyles, and the end of the shaft projected into the popliteal space. On the twenty-fourth day, the leg was amputated on account of mortification of the foot, and on examining the limb, the condyles were found separated and placed so that their articular surfaces were directed forwards.

Inordinate action of the muscles on one side of the limb consequent on the laceration of those of the opposite side, their antagonists, displacing the fractured bone, and constituting an insuperable obstacle to its adjustment.

Of this, the following well-marked instance occurred in the hospital during the last winter. A boy, aged 10 years, was admitted with a compound fracture of both bones of the leg, from a heavy stone falling on it, the edge of which completely cut through the skin and muscles on the front and outside of

the limb. The end of the upper portion of the tibia protruded through the gap in the integuments, and many efforts were ineffectually made to replace it. I removed the pointed extremity of the bone, and then repeated the efforts to replace it, but with no better result; the end of the upper portion of the tibia still projected in front of the lower portion to the extent of full three quarters of an inch. The reparation of the injury was now wholly left to the natural processes; the results were, that with a small exfoliation from the exposed end of the tibia, the bone gradually adjusted itself, and the fracture united without irregularity or shortening of the limb. Here I believe the obstacle to the adjustment of the bone was the uncontrolled action of the muscles in the back of the leg, their antagonists, the muscles in the front and outside of the leg having been completely divided by the sharp edge of the stone.

Treatment of fractures which are slow of union. On the use of the immoveable apparatus.

I select these points for consideration in the treatment of fractures, because it happens that they can be practically illustrated by cases which are, or recently were, in the hospital. There are fractures which are slow of union, and fractures which will not unite; fortunately the former are of most frequent occurrence; they require the help of good apparatus, and it is to the nature of this apparatus, and to the principles which should guide its use, that I am about to advert. Formerly, and indeed until within a few years of the present time, no other view was generally adopted respecting the treatment of fractures slow of union than that if at the expiration of the ordinary period, the union was ascertained to have failed, the splints were re-applied, and the patient again confined to bed, with a more strict enjoinder of the absolute quietude of the broken bone, and that if after the lapse of many more weeks no advance towards the union could be ascertained, it was pronounced an ununited fracture, remediable only by sawing off the ends of the bone, or by the passage of a seton between them, or by some other of the measures appropriated to this class of cases. But we have now learned by experience that in the event of a fracture failing to unite within the usual period, methods are to be adopted far more gentle, and, what is more important, far more likely to be successful, than any one of the severer proceedings just indicated. These methods are, exercise of the limb for the advantage of the action of the muscles surrounding the broken bone, maintenance of firm pressure against the portions of bone, that they may be kept

steadily in contact, and if possible by their periosteal surfaces.

Influence of the action of the muscles around the slowly uniting fracture.

Of this there can be no doubt; it is evidenced to us in the many instances of fracture of the tibia not firmly united within the ordinary period, wherein the patient has been desired to move about on crutches, not bearing weight on the limb, but swinging it about freely, and in a short time the uniting medium, which was flexible, is found to be perfectly firm. I lately had in the hospital a woman, aged 32, with a fracture of the femur, at the junction of its upper and middle third; it was treated strictly by confinement on the back, with the application of a long splint to the outer side of the limb. At the expiration of two months, the ends of the bone were ascertained to be freely moveable. The thigh was then kept firmly encased in leather splints through the next two months, at the expiration of which the ends of the bone were found to be still freely moveable; it was now determined again to apply the leather splints in a manner to maintain firm pressure against the end of the bone, and besides, to encase the thigh in the splints composed of layers of linen cemented together by the mixture of white of egg and flour, and around these to apply the starched roller. The limb being thus secured, the patient was desired to move about freely on crutches. Almost from the commencement of this plan, the woman began to express a consciousness of firmness in the limb of which she had not before been sensible. After another six weeks, the bone had become so firm that she could bear weight upon it, and she left the hospital walking perfectly well. I could draw no other conclusion from this case than that the firm union of the fracture was mainly attributable to the adoption of the proceedings having for their object the free action of the surrounding muscles. Since, in this case, the firmness of union had not commenced at the expiration of four months from the occurrence of the fracture, it almost warrants the conclusion that no period is too late for the commencement of that stage of the reparative process of fracture upon which the firmness of its union depends.

Influence of pressure upon the ununited fracture.—The application to the limb of stiff leather splints, or other apparatus calculated to maintain firm pressure against the bone, is undoubtedly a most important part of the treatment of ununited fractures, and the merit of first establishing it belongs to Mr. Amesbury*. It should not be the object to

* Remarks on the Nature and Treatment of Fractures, Vol. 2.

maintain the fractured ends of the bone in contact, but rather that the two portions of the bone should overlap, to allow of their periosteal surfaces being firmly pressed together, for as the tissue of periosteum is more readily disposed to the deposit of osseous matter than the tissue of bone, accordingly by the actual and firm contact of the periosteal surfaces the advantage is obtained of a better chance of the union of the fracture, which well compensates for the shortening of the limb consequent on the overlapping of the two portions of the bone.

On the use of the Immoveable Apparatus.—The treatment of fractures by the immoveable apparatus, as it is termed, has been of late especially adopted by Dr. Scutin, Chief Surgeon of the Hospital at Brussels. The object aimed at by this treatment is to avoid the inconvenience of confinement, by enclosing the limb in an apparatus sufficiently strong to prevent the separation of the fractured surfaces, and of sufficient lightness to allow the limb to be moved about with ease. Varieties of apparatus have been recommended for this object; that which I employ in the hospital consists of the splints, composed of layers of linen, cemented together by a mixture of white of egg and flour, and of the starched roller. The excellence of the splints thus constructed is, that with the firmness of the case they form, they are so exactly moulded to the inequalities of the limb, that when confined to it by the turns of the roller, not the least movement of the limb within the splints can occur; and this is obviously essential to the quietness of the ends of the bone. Curiously enough this turns out to be the revival of a practice adopted in bygone times. Cheselden, in his *Anatomy*, states "that a professed bone-setter living in Westminster communicated to him the following method of treating fractures; this way was, after putting the limb in a proper posture, to wrap it up in rags, dipped in whites of eggs, mixed with wheat flour; this drying, grew stiff, and kept the limb in good position;" and in his observations appended to *Le Dran's Surgery*, Cheselden observes, "there is no bandage equal to this for a fractured leg. I always use it, leaving that part upon the tibia very thin, that if it grows loose by the abatement of swelling, I then cut out a piece, and bind it closer. Upon a journey, I once set the cubital bones of a gentleman's arm that was broken, and making use of this bandage, he the next two days made long journeys without any inconvenience, and at the end of forty days took it off, and was perfectly well."

There are objections to the indiscriminate use of the immoveable apparatus, and especially to its application upon a fractured

limb immediately after the receipt of the injury; still, however, under certain circumstances, it is a most valuable addition to our plan for the management of fractures. Upon the subsidence of the inflammation and swelling immediately consequent on a fracture, the limb may in general with safety be enclosed in such splints as I have described, and which, when properly applied, will prevent any motion between the ends of the bone, and with a fracture of the femur as of the tibia, by the application of these splints, the patient will be enabled to move about on crutches, and even bear weight on the limb long before the fracture is firmly united. In several cases of fracture of the tibia I have by means of this apparatus been enabled to discharge the patient within little more than a fortnight from the occurrence of the accident, when, for particular reasons, it has been an object of importance to leave the hospital at this early period, instead of remaining here the usual time of five or six weeks. Recently there were in the same ward two cases of simple fracture of the leg, to which this view of the subject especially applies; they occurred in women who were oppressed by anxiety to return home to the care of their families; one was a fracture of the tibia and fibula, near the ankle-joint; and on the seventeenth day, the limb being encased in the immoveable apparatus, she left the hospital, bearing weight on it, and moving about comfortably with the help of crutches; the other was a fracture of the tibia alone, through its centre, and on the nineteenth day, with the same apparatus applied to the limb, she left the hospital, moving about without uneasiness. In another class of cases the greatest benefit has been derived from the use of the immoveable apparatus. I allude to fractures of the thigh and leg in aged persons, in whom, from their not bearing confinement well, the stomach has become deranged, with failure of appetite, and obvious decline of the vital powers; directly these changes are noticed, the injured limb is enclosed in the immoveable apparatus, whereby the patient is enabled at once to get up and move about on crutches, and the unfavourable symptoms have immediately disappeared. I feel certain that by adopting this line of conduct the lives of some old people have been saved, who otherwise would have sunk. Such were the circumstances of the following case. A woman, aged sixty-four, was admitted with a comminuted fracture of the tibia and fibula. When she had been confined upon her back for a week, the skin upon the sacrum became red and painful; it was evident that sloughing of the parts would here quickly ensue if pressure were continued upon them; consequently, I had the patient

placed on her side, but the skin upon the trochanter soon suffered in the same way ; at the same time, the appetite failed, and from the rapid decline of the vital powers, it soon became evident that to confine the patient any longer in bed would certainly be fatal. Accordingly, on the tenth day, I had the leg enclosed in the splints composed of layers of linen, cemented together by the mixture of white-of-egg and flour, thus enabling the woman at once to sit upright in bed, with her legs resting on the floor, and in a few days to move about on crutches. The most marked improvement, in every respect, immediately followed this change in the treatment. The leg, which before the application of the immoveable apparatus was severely painful, now became perfectly easy ; her nights had been restless, but she now slept soundly ; appetite returned, and her vital powers quickly rallied. As the limb continued free from pain, the splints were not removed for a fortnight ; then they were re-applied. At the end of six weeks, the woman left the hospital with the bones in good position, and the fractures firmly united. This woman certainly owed her life to the help that was obtained in the management of her case by the application of the immoveable apparatus to her leg.

The following cases are further illustrations of this treatment of fractures slow of union.

A man, aged 46, was admitted with a very oblique fracture of the tibia and fibula a little above their centre. After strict confinement in bed for seven weeks, with the application of the ordinary splints, not the slightest union of the fracture had taken place. The leg was then firmly encased in leather splints, fixed by strips of adhesive plaster, and surrounded by a starched roller, and he was desired to move about on crutches. When this plan had been in operation about a month, I examined the limb, and found the fracture in progress of union. At the end of another fortnight he could bear weight on the limb ; soon after which he left the hospital with his leg perfectly firm.

A man, aged 66, was admitted with a fracture of the femur about its centre, from a fall into a saw-pit. The limb was strictly confined for six weeks in the straight position, with the long splint applied to its outer side, and through this period the limb had not been once disturbed ; but on removing the splint there was not the slightest union of the fracture. The limb was then treated in the same way for another month, at the expiration of which, the ends of the bone were found to be still freely moveable. The thigh was then encased in leathern splints, bound very firmly to it by strips of adhesive plaster, and the whole surrounded

by the starched roller. At the same time, the man was urged to move about on crutches, which, after a little time, he accomplished. About once a fortnight, the leather splints were removed and replaced, and with the satisfaction of finding the ends of the bone gradually less moveable ; but it was not until five months had elapsed that the uniting medium had become firm enough to support the weight of the body ; this, however, it ultimately did, without yielding, and without pain.

IMPORT OF THE NERVOUS SYSTEM IN SECRETION AND IN IRRITABILITY.

To the Editor of the Medical Gazette.

SIR,

As the due performance of the whole secretory function constitutes health, it must be some failure in this process which induces disease. We may examine every variety of secretion with all the aid and appliances of modern chemistry, and determine their composition with great accuracy, and yet remain entirely ignorant of the mysterious agency by which such wonders are effected ; therefore, although we may know precisely in what health consists, we shall never be able to comprehend why it fails until we have discovered on what it depends. It is thus clear, that the first object of inquiry, without regard to whether one department of the secretory process is more immediately important to life than another, is, simply, what is it that maintains health, or life ? (I consider these terms as being in one sense nearly synonymous ; because life becomes languid, or ceases altogether, in proportion to the failure of one or more of the several parts of the secretory process.) Formerly the term secretory function embraced only the more obvious products resulting from the circulation of the blood ; such as the growth of parts, and of the nails and hair, the deposition of fat, formation of bile, synovia, &c. ; but of late years a more extended meaning has been attached to it, and it is now understood as comprehending every thing eliminated from the blood as it passes through the capillaries whether of the general or pulmonary circulation ; so that now, besides what have just been enumerated, the expression includes the process by which the

blood is changed from black to red, and from red to black, the evolution of caloric, and that constant interstitial change of the elementary molecules in every part, bone, sinew, muscle, and parenchyma of every description, whereby every structure, hard or soft, unyielding or elastic, is maintained in that condition which is expressed by the word healthy. A failure in any department of this function will induce a local disease; and it might be considered that the most simple and easy plan of proceeding would be to take the examination separately of the mode in which each part is affected first, and afterwards to contemplate the whole under similar circumstances. But, in truth, a failure in one part so affects not only others, but the whole, according to the degree of its affection and its subservience to life, that that which is at first simple becomes in its progress excessively complicated; it is, therefore, practically more simple, to regard the failure of the secernent function as a whole, and a clearer and more concise idea of disease will be obtained.

The obvious part which the circulation of the blood plays in carrying the pabulum from which all the various products of the secernent function are eliminated in the different tissues and organs to which it is distributed, has caused the heart and blood-vessels to be regarded as the system on which the maintenance of life more especially depends. It was easy to show that the death of a part was as surely effected by cutting off its supply of blood, as the death of the whole body was produced by draining off the whole quantity of blood; and these circumstances, considered in connection with the fact that the heart may be seen contracting after it has been taken out of the chest and placed in warm water, or even on a table, have been held sufficient by many physiologists to prove, that the sanguiferous system is capable of maintaining the circulation of the blood, and consequently the life, in virtue of its own inherent power or irritability.

Although there appears to be much in the circumstances just mentioned to support this opinion, there are many striking phenomena referrible to the nervous system, which discover in it an influence at least equal to that of the sanguiferous system in maintaining

life; thus we find that a section of the nerves or brain is no less surely followed by partial or total death, than a corresponding injury to the blood-vessels or heart; while it is urged effectively against the idea of the inherent and independent irritability of the heart, that (regard being had to the state of our knowledge, or rather ignorance, of the nervous function, the subtle and mysterious nature of the nervous influence, and how it may be conveyed and distributed to the muscular fibre) it is quite impossible, in cutting out the heart from its connection with the body, to say that it can thus be separated from its nervous influence.

Thus there are two opinions on this most important question so much in opposition, that one of them must be wrong; the former is that which appears to be most in favour with the systematic writers of the present day; to such an extent, indeed, that I do not think Dr. Alison exaggerates, when, in introducing a notice of some experiments performed a few years ago by Dr. J. Reid to the British Association, he says, "Although physiologists are still divided in opinion as to the question whether nerves furnish a condition necessary to the irritation of muscles, (that is, whether every stimulus which excites a muscle to contraction, acts on it through the intervention of nervous filaments), they have now very generally abandoned the once prevalent theory, that the irritability of muscles is derived from the brain or spinal cord." It seems to me, that the great fact, which has above all others operated in turning the current of public opinion in this direction, is the circumstance of infants being born alive without any brain, but perfect in every other respect. This fact has been eagerly seized upon by the disciples of Haller, as affording the exact evidence requisite to place their doctrine beyond the reach of any farther cavil. They argue, that if a fœtus can grow to full size, and be born alive, and move without a brain, there can be no longer any doubt about this organ being non-essential to life, and therefore as little concerned with the secernent function as in supplying any condition necessary to the action of muscles. The birth of these brainless creatures may be regarded as experiments of nature's own performance, of the most unex-

ceptionable kind, uncomplicated with pain, or loss of blood, or shock to the general system, and therefore entitled to higher consideration than any in which the knife is employed. It is very remarkable, that the attention of physiologists has been exclusively fixed upon the fact of these creatures being born alive, while the fact of their death, which invariably soon follows, has been passed over as scarcely worthy of notice; but it is evidently most unfair to lay all the stress on one half of an experiment, and to slur over the other half in silence, where every part is equally profitable for information. An acephalous fœtus may certainly come into the world alive, but we find that it *begins* to die as soon as it is born. The death, therefore, is as much to be considered as the birth; the experiment not being complete until death has taken place. It does not require any great depth of physiological knowledge to enable us to arrive at a just estimate of extent of information which such malformations afford; a little common sense is all that is necessary to a right understanding of the question. Connection with the parent is all-sufficient to maintain the life and growth of a fœtus; but this connection cannot last for ever; the time for separation must come, and it will then require to be furnished with the means of maintaining for itself an independent existence, to compensate for what it will lose when its life can be no longer derived from its original source; if it be not so provided, it must inevitably die. The real question, therefore, is not whether an acephalous fœtus can live and grow in utero, but whether it can live after it has been born; and when we see that infants of this kind invariably begin to die the moment their connection with their mothers is interrupted, bearing in mind the fatal consequences of any serious lesion of the nervous system, and the extent to which all the vital functions are affected by circumstances and events which act on the brain through the mind, I think there can be no other conclusion than that the nervous system maintains the life and growth, and consequently the health, and every manifestation of life. According to this view, an acephalous fœtus is in very much the same situation as any other part which might be cut off from

a living animal, and which dies simply because it has no capability of supporting an independent existence. I consider the evidence afforded by these experiments of nature's own making so conclusive against the doctrines of irritability, that it is unnecessary to bring any formal objections against those of Dr. J. Reid. It is useless to keep up a warfare with pistols, when the citadel is not only taken, but the cannon turned against its former masters.

It is very certain that many of the most respectable of modern writers have ranged themselves among the disciples of Haller; but I think a sufficient reason may be found to account for this, without taking it for granted that the weight of evidence must necessarily rest with the greatest number of witnesses. Those who have adopted the opinion that life is maintained by the agency of the nervous system, have laboured under the great disadvantage of not being able to give such an explanation of its *modus operandi* as might suffice to found a system upon: they have not been able to say what nervous influence is, or how it may be applied, or any thing about it; hence their doctrines have had a certain air of mystification and uncertainty not at all calculated to suit those who have wanted to write books. On the other hand, their opponents, if in error, have at any rate had the advantage of being able to form a clear and connected theory to countenance their practice. They have found in the endowment of the muscular fibre of the heart with irritability an ultimate fact, as a foundation to commence with. This point being gained, they have been able to attribute muscularity and irritability to the blood-vessels, and to find, in experiments which, *under favourable circumstances*, show that a gradual constriction and as gradual a relaxation, rather of the tissues which contain the capillaries than of the capillaries themselves, occupying altogether as much as six or seven minutes, and which may sometimes be repeated as many as nine times in an hour, evidence of their being able to act several thousand times in every hour. This second difficulty being thus surmounted, they have found no trouble in imagining each vessel to be endowed also with the knowledge how to make use of its

power for the common weal of the body, and to meet any emergency that might arise. It appears to me that it is this facility of explaining the various phenomena of health and disease in a plausible manner, rather than their truth, has rendered the doctrines of Haller so acceptable to systematic writers.—I propose to proceed with this subject in my next letter; in the meantime I am, sir,

Your obedient servant,

J. W. EARLE.

Cheltenham, Oct. 1844.

ON PERICARDITIS.

BRIEF OBSERVATIONS, WITH A CASE READ
AT THE FIRST MEETING OF THE SOUTH
LONDON MEDICAL SOCIETY,

Oct. 17th, 1844.

By H. M. HUGHES, M. D.

Assistant Physician to Guy's Hospital.

(For the *London Medical Gazette*.)

It is probable that in no disease has there been within the present century so great an advance in precision of diagnosis, as in Pericarditis. The consequent knowledge of the indications of treatment may be presumed to have made an equally rapid progress. Forty years ago it was scarcely known as a common attendant upon rheumatism, and within the last twenty years it was regarded as one of the most obscure and difficult of detection in the entire catalogue of diseases. Its diagnosis now generally presents no greater difficulty than that of pleurisy. The increased precision which now exists has had its origin almost entirely in the employment of auscultation and percussion, conjoined with the study of morbid anatomy; yet it is remarkable, that almost all the discoveries in reference to the physical indications of this complaint, have been made since the publication of the original work of Laennec, and that most of them have become known, or generally established, since his death. It has been said by one whom all who know respect, that "It is a duty incumbent on the physician, who has ventured at any time to lay before the profession his ideas of disease, and its treatment, to review from time to time his published opinions, that he may see how far subsequent

experience has borne out, or modified, his former impressions; and if he detect any material alteration in his mode of viewing disease, more particularly as regards the practice he has found beneficial, it is right that he should take an opportunity to make it known." In the spirit of this remark, I have recently perused an essay "On the Symptoms and Diagnosis of Pericarditis," written by myself nine years ago, and published in the first number of the *Guy's Hospital Reports*. I find therein many forms of expression which it would be well to change, and some opinions which might be advantageously modified. But considering the time at which it was written, when the author was comparatively young and inexperienced, and when a familiar acquaintance with the disease may be said to have been young also, there is perhaps less to correct than might have been expected, and certainly less than I had myself anticipated. Some points requiring modification may be noticed in the sequel. The distinction, however, there made in three classes of cases of pericarditis; viz. 1st, Those in which pus is effused into the pericardium, and the heart itself is involved as well as its investing membrane, and in which the symptoms are those of acute fever, and are principally referred to the brain; 2ndly, Those in which the effusion is liquid, and large in quantity, from an early period, or from the commencement of the attack; and 3dly, Those in which the effusion is primarily and principally plastic, I still regard as a natural, and therefore a legitimate distinction. Cases of the first order are comparatively rare; those of the second do not occur frequently; while those of the third order are very common. The time which I may consider as fairly allotted to me on the present occasion will not allow of the perusal of an extended essay. I trust, therefore, I shall be excused for expressing myself with a brevity which will almost necessarily give to my statements somewhat of a dogmatical character.

The exciting causes of idiopathic pericarditis may be considered similar to those giving rise to inflammation in other serous membranes—as cold, external violence, the presence of tubercles, extension of disease from contiguous structures, &c. &c. The most com-

mon cause of pericarditis, however, is undoubtedly the state of the system, or circulating fluid, which exists in rheumatism. It has been supposed by some, that in rheumatic pericarditis a true metastasis occurs. If by this it is intended that upon the supervention of inflammation in the pericardium, the rheumatism of the joints altogether, and universally ceases, and that the latter re-appears upon the cessation of the former, the opinion is certainly incorrect; as it often happens that the joints continue to be severely affected during the progress of the internal inflammation. It is nevertheless undoubtedly true that the intensity of the external disease is sometimes considerably diminished upon the supervention of the more severe internal affection. It has been supposed also, that the employment of venesection in acute rheumatism contributes to the production of pericarditis. There may be some truth in this opinion. It is certainly, to say the least, a remarkable coincidence, that when M. Bouillaud commenced the practice of repeated bleedings ("his *saignées coup sur coup*") for the cure of rheumatism, he then, and not till then, discovered (years after the fact was generally known in England,) that the disease was very frequently, or he says himself almost always, accompanied with some affection of the heart. It is indeed possible, that by his frequent venesection, M. Bouillaud may have contributed to the production of anæmic murmurs, which may have been sometimes regarded as an indication of the presence of endocarditis; but it is also possible that the same cause may have contributed to the production of disease in the heart, or its investing membrane. On the other hand, many years ago I was in the habit of seeing a good deal of the practice of an experienced physician, whose almost universal habit it was to prescribe venesection in acute rheumatism, yet I certainly do not remember to have observed that his patients were more frequently attacked with pericarditis than those of his colleagues, who treated differently the patients submitted to their care. It has been lately asserted that pericarditis in rheumatism is caused by the administration of colchicum, and that it rarely, if ever, occurs when that medicine has not been employed. This is certainly a mistake;

though when the remedy acts violently, and depresses greatly the power of the patient, it is possible, that, like venesection, by causing the complaint to shift its seat without removing its cause, it may, in persons predisposed, rather favour the occurrence of the internal complaint.

Pericarditis may appear during every stage and in every form of rheumatism. It more commonly, however, occurs during the first ten, or perhaps six days of its course, and in the acute or sub-acute form of the disease. It is also, I believe, more frequent when the original affection is constantly changing its seat, attacking this joint to-day, and that joint, or set of joints, to-morrow. It is certainly much more common in children than in adults, and, as a general rule, I believe it may be stated that the younger the subject affected with rheumatism, the more liable is he to inflammation about the heart; and conversely, that the older the patient is, the more likely is he, supposing him to have been previously free from cardiac disease, to escape this important complication. When first attacked with pericarditis, the patient often makes no complaint in addition to those which had been before noticed, but the observant practitioner generally at once sees that he is not so well, and that there is increased mischief somewhere. He remarks that the aspect is altered; the position of the body more constrained; that the pulse has changed in character, and has become less tense, and more frequent; that the skin, if not dry, is less profusely covered with perspiration; and upon inquiry, but often only upon inquiry, he finds that his patient has a sense of oppression, or a dull heavy pain, at the scrobiculus cordis. His attention being now directed to the heart, he ascertains that tenderness exists upon pressure in the epigastrium, or in the intercostal spaces over the heart; that the diaphragm is very slightly depressed in the act of inspiration, and that the respiration is therefore nearly entirely thoracic. Upon applying the ear, or stethoscope, to the chest, nothing abnormal may be at first discovered; but, if not at that time, on the next day, there will be heard a superficial rubbing noise in some portion of the præcordial region, and very frequently, together with this, a bellows

murmur in the situation of the aortic valves. Such, then, are commonly the indications of the existence of pericarditis: a pinched or anxious countenance, approaching to the "risus sardonius;" a constrained position of the body, with great disinclination to move it; a pulse varying from 96 to 120, less tense and thrilling than that of uncomplicated acute rheumatism, but of variable character; the skin less inclined to profuse perspiration; the respiration effected by the elevation of the ribs, without descent of the diaphragm, (a condition exactly opposite to what occurs in common pleurisy, but similar to what happens in that disease, and in peritonitis, when affecting the diaphragm,) oppression or pain at the base of the sternum, and frequently tenderness upon pressure of the præcordial region*.

As the disease advances, and the effusion is therefore more extensive, the rubbing noise becomes more distinct and generally diffused; the other symptoms continue, or increase in violence. If the patient is early seen, and is of good constitution, the disease is speedily recognised, and, actively treated, the rubbing noise ceases almost as suddenly as it appeared; no appreciable dulness on percussion will be discovered, and the other symptoms rapidly vanish. If, on the contrary, the patient is of an unhealthy habit of body, scrofulous, or phthisical, or depressed in power, is not seen soon after the accession of the complaint, or is not treated efficiently, the rubbing may also suddenly disappear; but from an entirely different cause; serum, or seropurulent fluid is effused, and being interposed between the two layers of the roughened pericardium, interferes with their attrition, and consequently prevents the sound which is produced by it. This cessation of the rubbing noise does not always occur suddenly all over the præcordial region, but sometimes commences from below, and gradually progresses upwards; so that the amount of fluid effused can be determined with tolerable accuracy by the defined line below which the rubbing

cannot be heard, and above which it is still audible. It sometimes happens, after some dulness on percussion has already appeared, that the rubbing noise, which so long as the patient lies quietly on his back cannot be heard, in consequence of the intervening serous effusion, may be reproduced by altering the position of the body—as turning upon the side, or sitting up in bed, by which the serous fluid gravitates from between the opposing surfaces of a portion of the pericardium, and thus allows of their coming in contact, and of their attrition. I have also observed, after the rubbing noise has temporarily ceased, in consequence of a small amount of serous effusion, if the patient is young, and the ribs therefore freely flexible, that even while he is lying upon his back, the rubbing noise, which is inaudible under ordinary pressure, may sometimes be reproduced by pressing the stethoscope, or ear, more firmly than usual upon the præcordial region. This arises from the local pressure squeezing out the fluid intervening between those portions of the pericardium to which the stethoscope is applied, and thereby causing the two roughened surfaces again to rub against each other. The rubbing noise at length disappears altogether, and at or about the same time the natural dulness of the præcordial region is increased both in extent and in degree: the patient becomes more distressed, the countenance more anxious, the breathing more hurried, the pulse more rapid and feeble, sometimes fluttering and irregular; the natural sounds of the heart are but feebly heard, and no morbid sounds are audible; the action of the heart is tumultuous, the patient is unable to lie down, the face becomes suffused with perspiration, and the heat of the extremities decreases: unless soon relieved, the patient dies, and after death a considerable amount of fluid effusion is found in the pericardium. If, on the contrary, the medicines act favourably, and the remedies employed produce their intended effect, the expression of the countenance improves; the breathing becomes less hurried, the pulse more firm and full, and the rubbing noise is again heard; first, at the upper part, and then gradually, as the fluid becomes absorbed, over the whole of the præcordial region. At the same

* It is not, however, a little remarkable, that Dr. Addison, who does not dispute that pain may occur as a symptom of pericarditis, has never, to his knowledge, met with a case where he had an opportunity of arriving at a positive conclusion, either from inspection or stethoscopic signs, that he did not find pleurisy conjoined.

time, but by no means with equal rapidity, the dulness on percussion diminishes. It generally happens that after a few days the rubbing again partially or entirely disappears, in consequence either of the adhesion of the pericardium, or of the complete removal of the inflammatory effusion. In a short time the patient regains his strength, and feels and represents himself well. He is, however, too often left with a damaged heart from some product of disease remaining behind, either internally or externally, and sometimes both. It sometimes happens, on the contrary, and particularly when the disease has been of long continuance, and has existed for a considerable period in a chronic form, that though the fluid be absorbed, the two surfaces of the serous membrane do not adhere, in consequence of a dense coating of organised solid matter of varying and variable density, which itself becomes a secreting surface. Under such circumstances, the individual has for months or years, or sometimes during the whole of his remaining life, a harsh rubbing, grating, or scraping noise, over the whole or a portion of the præcordial region, which is frequently so loud as to be distinctly heard by persons standing near the patient, without applying the ear to the chest, and to be audible by the patient himself. If he be again attacked with pericarditis, fresh effusion may occur, and the two surfaces thereby become permanently adherent.

The rubbing noise ("frottement") of pericarditis has been stated gradually to merge into the bellows murmur, "*bruit de soufflet*," and the late amiable and lamented Dr. Hope supposed that the latter, when occurring in pericarditis, might be caused by the rapid propulsion of the blood through the aortic opening. The former opinion I deem a mistake, the latter a dangerous error.* I do not indeed now believe that the bellows murmur is so constant or almost universal an attendant upon rheumatic peri-

carditis, as when I wrote the essay to which I have referred, yet continued observation leads me to suppose that it is very frequently present, and that even when not detected, it is often for a time only obscured by the more noisy and superficial rubbing noise, produced by the attrition of the roughened pericardium, and therefore that it does not become audible till that rubbing disappears. I am also deeply impressed with the conviction that it arises from inflammatory thickening of the sigmoid, or other valves, and that, frequent as is the occurrence of pericarditis in rheumatism, the inflammatory thickening of the valves (the so-called endocarditis of some authors,) is a much more frequent, and prospectively a much more serious complication of that complaint. With a thickened or adherent pericardium, it appears probable at least that a person may continue to live for many years without much inconvenience. With thickened valves, and consequent obstruction in the cardiac orifices, farther morbid changes almost necessarily commence at once. As it is a more frequent, and prospectively a more important complication of rheumatism, I believe that the internal affection, in consequence of its less prominent symptoms, is also much more liable to be overlooked. It is not generally, however, I believe, strictly speaking, true endocarditis, or inflammation of the lining membrane of the heart, but disease of the tissue behind the lining membrane, which it often leaves as smooth and as polished as before the attack, although the valves themselves may be opaque, thick, and rigid. True endocarditis gives rise to vegetations or plastic effusion upon the lining membrane: this affection generally produces a deposit below the membrane.

The affection I have briefly referred to in the preceding pages is pericarditis, primarily accompanied with plastic effusion, as in a great majority of cases it occurs in connection with rheumatism. When arising independently of this disease, the inflammation of the pericardium is more frequently accompanied in an early stage with fluid effusion. Then, of course, the signs afforded by the attrition of the roughened membrane will be absent. Liquid effusion exists more especially

* Since writing the above, I have been informed by Dr. Munk, that though the late Dr. Hope did hold the opinion stated in the text, at the time his work was written, he had occasion to change his views upon the subject before his death, and believed that the bellows murmur in pericarditis was produced, as I have long maintained, by inflammatory thickening of the valves.

when the disease occurs in scrofulous subjects, or in persons worn down by other chronic disorders, or when it takes place in the last few days of life.

So common is one or other, or both, of the affections to which I have referred as complications of rheumatism, especially in young subjects, and, though little regarded at the time of the attack, so serious are the consequences to the sufferer in after life, that I conceive a practitioner, while attending a patient with acute rheumatism, should at every visit examine the heart, by placing the ear or stethoscope on the præcordial region, that he may discover and repulse the dangerous and insidious enemy on its first appearance.

In reference to diagnosis, the only affections with which pericarditis, when occurring under the inspection of an observant and well-informed practitioner, is likely to be confounded, are pleurisy in that portion of the serous membrane which lies over the heart, and old pericardial disease. The diagnosis between the former complaint and pericarditis is indeed an affair of extreme nicety. In both a rubbing noise may exist synchronously with the systole and diastole of the heart, and if the pleurisy extends, as it often does, to the phrenic portion of the membrane, in both is the respiration thoracic, and the countenance, the breathing, the pulse, may be similar in both. Under such circumstances I know of no distinction between the symptoms and physical signs of the two complaints, excepting that it may be generally observed, that in the pleuritic complaint the rubbing becomes obviously louder during the act of inspiration, by which the roughened pleura is more firmly appressed against the heart, than during the expiration. This may be considered too trifling a circumstance upon which to found a diagnosis; it is therefore fortunate that the treatment of the two diseases is identical. To determine whether an individual who has been attacked with acute rheumatism, who has previously suffered from the same complaint, accompanied with pericarditis, and who is now seen for the first time, has or has not a recent inflammation, supervening upon old disease of the pericardium, I hold to be impossible. It is therefore, I think, the safer practice

always to treat such patients as if recent disease actually existed.

Mercury, together with the vigorous employment of local bleeding, and counter-irritation, may be considered as the great remedy in pericarditis. It has been indeed stated by a deservedly high authority, that in salivation alone is safety; in other words, that unless the patient can be brought under the constitutional effect of mercury, the disease, when accompanied with fluid effusion, will prove fatal. It has been also supposed by some, that adhesion of the pericardium is almost the necessary attendant of recovery from an attack of acute pericarditis. As a rule, the truth of both these propositions may be conceded. They are, however, I think I may be allowed to say, liable to exceptions, as persons do occasionally recover who have been known to labour under acute pericarditis, but who have presented no other evidence of the constitutional effects of mercury than the subsidence of the disease; and numerous instances occur in which patients recover, in whom the disease has not been recognised, and has consequently not been submitted to any treatment. It must also, I think, be conceded that after an attack of pericarditis with effusion, a patient may regain a tolerable state of health without adherence of the membrane; that in fact the effusion may be absorbed, and the pericardium restored to its natural condition; unless, indeed, an adherent pericardium may exist for years without causing the slightest distress to its possessor. It is, however, certain that such cases are very rare, and that their very existence may still be doubted. I possess copious notes of a case which I attended in the year 1837, as a patient of the Surrey Dispensary. He took two grains of calomel (with opium and antimony) every four hours for ten days, and in addition thereto rubbed in mercurial ointment three times a day for five days. He continued the same remedies at longer intervals for some days after. The mercury did not run off by the bowels, and indeed appeared to produce no other effect than that of increasing the quantity of urine, yet after rather a tedious illness he so far recovered as to be able to return to his work at a printing-press, at which, with occasional intermissions, he con-

tinued to be engaged for more than a year and a half. He ultimately died, rather more than two years afterwards, under the care of my colleague, Dr. Barlow, with the ordinary symptoms of diseased heart. After death, this organ was found greatly enlarged; the pericardium universally adherent by the intervention of a moderately thick layer of old semi-transparent adventitious matter; the valves, with exception of those of the pulmonary artery, were thickened, and both pleuræ were adherent by recent lymph to the external surface of the pericardium.

I shall conclude by the relation of a single case, the features of the disease in which were especially well marked. I have entered into as little detail as possible, consistently with my object of presenting to the Society a distinct and illustrative example of the complaint on which I have the honour to address them.

CASE. — *Rheumatism.—Old disease of the heart, acute Pericarditis, Diarrhæa, &c.*

J—T—, æt. 14, a delicate looking girl, of light complexion, was admitted into Guy's Hospital under my care, June 8th, 1844. Two years before she had suffered from an attack of acute rheumatism, with some inflammatory affection of the heart, for which she had been actively treated and salivated. In about three weeks she had tolerably recovered, and had not since that time been attacked with rheumatism, or any acute disease, but had been occasionally troubled with shortness of breath, to which she had not been previously liable. Two days before admission, after exposure, she had been again attacked with acute rheumatism, and upon being placed in bed presented in a marked degree the common features of that complaint. The wrists, knees, and ankles, were red, swollen, and tender; the skin was soft and perspiring; the tongue coated with a thick flannel-like fur; the intellect clear; the bowels open; the urine high-coloured, and in small quantity; the pulse about 100, tense, and rather jerking. The præcordial region was found to be natural in both the extent and degree of dulness. The rhythm of the heart was also natural, and its impulse not abnormal; but towards the base of the organ was heard

a diffused and rather indistinct rubbing noise, which was certainly not of the character produced by the effusion of recent lymph, and which it was supposed might not improbably be dependent upon the unabsorbed product of her former attack. Still it was not to be overlooked, and she was consequently ordered to be cupped to ζvj. to the region of the heart, and to take

Pil. Antim. Opiat. c. Cal. gr. j., nocte maneque, et Mist. Magnes. c. Magnes. Sulphat. dimid. quantitate et Vin. Colech. ℥xv. ter die.

She was visited daily, but as no important change took place in her symptoms, excepting that the medicine acted freely on the bowels, the pains of the limbs somewhat decreased and shifted their place, and that what was presumed to be old pericardial rubbing rather diminished, it is not necessary to give any particular report till June 12th, the fourth day of her stay in the hospital, and the seventh of the disease. She had then the peculiar and somewhat anxious expression, and the disinclination to move the trunk, which are so constantly observed in pericarditis; her face was flushed, her skin hot; the pulse was more frequent and less tense; the respiration was pretty purely thoracic; she complained of oppression and weight at the chest; and of tenderness upon pressure over the præcordial region. Below the left nipple was now also very distinctly heard a rubbing noise (frottement) resembling that produced by the friction of two moist and soft, but rough surfaces. The prescription was as follows:—

Appl. C. C. regioni cordis ad ζviij.
Pulv. Rhei. c. Cal. gr. xij. hora scmmi.
Cont. Pil. 6ta quaque hor. cum Haustu Salin.

June 13th.—The powder had acted violently, and the bowels continued to be considerably relaxed; the rubbing noise had extended; *i. e.* it was heard over a considerably larger portion of the præcordial region. The oppression and tenderness upon pressure had been relieved by the cupping.

Omittatur Mistur. Rep. Pil. Capt. pro renata Mist. Cretæ, ζj.

During the next four or five days the rubbing gradually extended, and was at length most distinctly heard over the entire præcordial region. No

dulness, however, could be detected by the amount of percussion of which the tenderness produced, conjointly by the disease and by the previous cupping, permitted the employment. The countenance meanwhile retained its anxiety of expression, and the respiration its thoracic character, and the diarrhœa continued, notwithstanding the employment of the means indicated by the following prescriptions, which I here copy, in preference to giving a perhaps tedious daily report of her symptoms, which varied little during the period in which they were ordered.

14th.—Pulv. Ipecac. C. Hydrarg. c. Creta, aa. gr. iiss. M. ft. Pil. ter die sumend. Mist. Cretæ. post singulas desliquidas.

15th.—Cont. Mist. et Pil. Enema Amyli, c. Tr. Opii, ℥xv. statim injiciend. et cras mane repetend. urgent. diarrhœa.

16th.—Rep. Enem. Mist. et Pil. Empl. Cantharid. regioni cordis, et (in consequence of a slight pleurisy of the right side, indicated by pain and rubbing) applicentur Hirudines v. lateri dextro.

18th.—Omittantur Pilul. sed curetur pars exulcerata Ung. Hydrarg. fortioris, et Capt. c. singulis dosib. Mist. Tr. Opii, ℥iij. 6ta. quæque hora.

On the 19th, a new and a more alarming set of symptoms presented themselves. The gums were not even slightly affected by mercury, which in one or other form had been persisted in for eleven days; the rubbing, so distinct and general up to this day, had entirely disappeared; the præcordial region upon percussion had increased in dulness, both in extent and degree, and appeared also somewhat full and prominent; the countenance was now depressed, and excessively anxious; the face pale, and, together with the rest of the body, covered with perspiration; she could not lie down, and it was consequently necessary to support her with pillows; the respiration was much hurried, 48 in the minute; the pulse small, frequent, and running from 140 to 160 in the minute; the diarrhœa continued, but had now assumed more of a dysenteric character, as she had frequent calls to go to stool, but the evacuations were scanty, consisted chiefly of bloody mucus, with only a slight admixture of dark bilious feculent matter, and were passed with much tenesmus.

Ordered Empl. Cantharid. regioni cordis; Ung. Hydrarg. fort. 3ss. nocte maneque cruribus infricand. Cont. Mist. Cretæ c. Tr. Opii. ut antea. R. Pil. Saponis C. gr. viij. ft. suppositorium statim adhibendum.

20th.—The aspect of the countenance had somewhat improved, and the suppository had had the effect of removing the irritability of the rectum for several hours; in all other respects she was as on the day before.

Pergat. Rept. Suppositor.

21st.—She had improved in every respect: the gums were now fairly affected by the mercury for the first time since her illness; the dysenteric diarrhœa had considerably decreased; the countenance was much less anxious; the breathing less hurried, and the pulse less frequent and more distinct. A slight rubbing noise, synchronous with the systole and diastole of the heart, could not be heard at the upper part of the præcordial region.

Pergat. Beef-tea and arrow-root.

24th.—The rubbing had gradually reappeared over a larger extent of surface from above downward, and was now heard over the greater portion of the pericardium. It was, however, still slight in its intensity, and the dulness on percussion was nearly as extensive as before; the gums were sore; the bowels quiet; the respirations 38, and easy; pulse 120.

Cont. Ung.

R. Potass. Iodidi, gr. iss.; Liq. Potass. ℥xij.; Inf. Aurant. 3iss. ter die.

27th.—She had progressively improved: the bowels were natural. Respirations 40; pulse 120; the tongue was pale, moist, and rather furred from the mercurial action; the pericardial rubbing was now very distinct, loud, and general.

Cont. Mist. et Ung. Applicet. regioni cordis Empl. Cantharid.

She continued the same medicines, with slight and unimportant variations, up to July 1st, when the pulse was still 120, and the respiration, upon slight exertion, 40 in a minute: the pericardial rubbing had entirely disappeared, but a loud bellows murmur was now heard over the situation of the aortic valves; the tongue was moist, still rather furred from the mercury;

the appetite good: the sleep comfortable, and the strength increased.

Ordered—Ext. Hyosciam. gr. v. singulis noctibus sumend.; Sp. Ammon. C. ℥xx.; Inf. Aurant. ʒss. ter die. Intermittatur Unguent. Fish, and in two days a mutton chop.

After staying for a few days longer in the hospital, her mother was anxious to take her home; she was consequently removed to the vicinity of town, and from that time continued tolerably well.

On September 30th, I met her on London Bridge looking plump, and in good health, and walking briskly without any apparent inconvenience.

This case was not remarkable in consequence of presenting any unusual features, but rather from the changes occurring in its progress being uncommonly distinct and well defined, and from its being complicated with a long and severe attack of mucous irritation of the bowels, which undoubtedly placed the life of the patient in great jeopardy for some days. Upon her admission, in addition to the common symptoms of acute rheumatism, there existed evidence of *some* mischief about the heart, which it was supposed had been probably left by her former attack, and was considered to depend upon a roughened state of the pericardium. The distinct superficial rubbing of acute pericarditis, with solid effusion, afterwards appeared; the extension of which could be easily traced by the gradually enlarged surface over which the rubbing noise was audible. Then came the well-marked symptoms of large fluid effusion, together with increased dulness on percussion, and the sudden and complete cessation of the abnormal sound, which, as the fluid became absorbed, reappeared, and gradually extended from above downwards, till it was again heard over the entire præcordial region. It remained audible, until, as it was presumed, the adhesion of the two layers of the pericardium removed the physical conditions upon which it depended. One circumstance only, in connection with the symptoms and physical signs of the complaint in this instance, appears to admit of doubt, viz. the valvular disease indicated by the noisy murmur heard over the sigmoid valves at her exit from the

hospital, in connection with the evidence of old disease upon her admission. Upon this circumstance two explanations may be offered; neither of which appear to be improbable. 1st. We may have been mistaken as to the origin of the sound heard upon her admission, which may have arisen from disease of the valves; as old pericardial disease is not always easily, if, indeed, it can be at all positively distinguished from disease of the valves; or 2dly, the valves may be supposed to have been previously healthy, but by the recent attack to have become thickened and rigid. The indications of this change may have been obscured by the more noisy pericardial rubbing as long as it existed, may not have been elicited while the pericardium was distended and the heart oppressed by the accumulated serous effusion, and may therefore not have become obvious until the causes of their obscurity or their absence had disappeared.

With the exception of the question just mentioned, the diagnosis in this case, particular as well as general, was not doubtful, indeed could not be doubted, by one practically conversant with auscultation. Every variation in the condition of the pericardium appeared almost as distinct and obvious as if it had been actually exposed to view, and the chest, by the aid of auscultation, had been open to the eyes as well as to the ears of the examiner.* The prognosis, even in reference to the existing acute attack, was for several days exceedingly unfavourable, and I was on more than one occasion far from feeling satisfied that at my next visit I should find the patient alive. From this alarming state it appeared evident that she was released by the action of mercury; so soon as it began to affect her constitutionally the more urgent symptoms of her disease became ameliorated. The ultimate prognosis is necessarily unfavourable, as after two severe inflammatory attacks she is left with disease of the valvular apparatus of the heart, as well as of the pericardium. As to the treatment adopted, I have simply to observe, that deeply impressed with the importance of bringing the patient under the influence of mercury, I persisted in its employment, notwithstanding the mucous irritation of the bowels, which it was attempted, though ineffectually,

check by the administration of chalk and opium, and the employment of opiate enemata. I was at length unwillingly compelled, by the exceedingly excited and irritable state of the lower bowels, to suspend the internal use of mercury, and trust solely to its external inunction. The system was soon after affected by the remedy, and was kept under it for a considerable period. As soon as the internal employment of mercury was discontinued, the dysenteric state of the bowels was easily subdued by ordinary remedies, among which opiate suppositories appeared to be the most effective. On this account I am disposed to believe that it might have been more prudent to have desisted from the internal administration, and to have trusted to the external application of the mercury, at an earlier period.

SINGULAR CASE OF FATAL INTRA-UTERINE HÆMORRHAGE.

By WILLIAM THOMPSON,

Surgeon, Bognor.

(*For the London Medical Gazette.*)

Mrs. K., aged about 45, who had previously borne twelve children, and who was then at the end of the ninth month of pregnancy, retired to bed about nine o'clock on the night of the 5th of October, 1844. She had been perfectly well during the day, and, as far as I can ascertain, had felt none of the premonitory symptoms of labour.

About half-past nine o'clock she awoke her husband, and told him that she felt in pain, and must get out of bed; she did so, staggered against a chest of drawers, and fainted. He got her upon the bed, but says that she did not recover consciousness for a quarter of an hour. He wished to send for the midwife, but she said it was of no use to do so, as she had no pains of any consequence.

From this time till six o'clock the next morning I can obtain no very clear account of her state. At that hour the midwife was called, who found her in a very low exhausted state, her pains trifling, and recurring at long intervals. She found the os uteri well dilated, and the presentation natural, the vertex being in the brim of the pelvis.

The poor woman continued to get weaker and weaker for the next two hours; her respiration difficult, and articulation low and indistinct. At last she said she was sure there was something wrong, that she felt as if she was dying, and requested a surgeon to be sent for. On reaching the house, Mr. Peskitt found that she had breathed her last, and observed that she had the blanched appearance of a person who had died of hæmorrhage.

On examination per vaginam he found no discharge of any kind, the membranes entire, os uteri fully dilated, and the head in the brim of the pelvis.

I assisted at a post-mortem examination of the body, about fifty hours after death (up to which time there had been no discharge from the vagina). On opening the abdomen, we found the uterus very large, and apparently filling the whole cavity, pressing the whole of the floating viscera strongly upwards and backwards; these latter had a very bleached appearance, and all their vessels were empty. On raising the fundus of the uterus an immense quantity of bloody fluid rushed from the vagina; and on cutting into the womb (the walls of which were very thin), we found that it still contained more than two quarts of fluid and grumous blood, mixed with large coagula, which completely surrounded the child, enveloped in its membranes entire, with the head in the brim of the pelvis.

The placenta was wholly detached from the uterus, but the place where it had been attached was evident enough, on the right side of the womb, below the fundus: we examined this part very narrowly, but could discover nothing unusual in its appearance, or in that of the placenta. I think there can be no doubt that the hæmorrhage was caused by a partial detachment of the placenta, about the time she first complained of pain and faintness, and that it continued till nearly all the blood in her body was poured into the cavity of the womb. The total detachment of the placenta might have been caused by the immense distension of the womb, and the pressure of such a quantity of blood between its parietes and the membranes.

Bognor, Nov. 12, 1844.

ANALYSES AND NOTICES OF BOOKS.

“L’auteur se tue à allonger ce que le lecteur se tue à abrégé.”—D’ALEMBERT.

An Apology for the Nerves; or, their Influence and Importance in Health and Disease. By SIR GEO. LEFEVRE, M.D. Post 8vo. pp. xii. and 363. Longman and Co.

ANY peg will serve to hang a hat; and any title, it may be said, suffices a clever man to write an amusing book upon. In this “Apology for the Nerves” we have, in fact, a collection of short essays, pleasant, sparkling, full of anecdote, and observation, and learning, upon a very considerable proportion of the ills that waylay mankind; and which if they do not in every instance tend to cut short our journey, still in numerous instances make life a weary pilgrimage, full of bodily, and what is perhaps even worse, of mental suffering. We have the physiology of the brain and nerves discussed; the blood, muscular motion, nutrition and secretion, lightly and pleasantly handled; then we have sympathy, phrenology, mesmerism, sleep, and dreams; then the senses; next the influence of the blood upon the nerves, and such particular subjects as nervous complaints, headaches, epilepsy, palsy, catalepsy, hydrophobia, trismus, delirium tremens, hooping-cough, chorea, cholera morbus, scorbutus, diabetes, and fevers, &c. passed in review, and all with an ease and a grace that make us proud of having one member of the medical profession at least among us, who can blend amusement with instruction, interlard grave discussion with pleasant anecdote, and add general literature by way of seasoning to the tough morsels of pathology and etiology, diagnostics and therapeutics. We bid Sir George Lefevre’s “Apology for the Nerves” welcome! We have already passed more than one pleasant hour in its society, and have found striking illustration of more than one topic that had presented itself in dim perspective to our mind’s eye, among its pages.

As the apologist of the nerves, our author of course gives them enough to do. The nervous influence it is which enables man “to resist a degree of heat

superior to that of boiling water, and without injury.” But “the power is of short duration, the nervous influence is exhausted, and then chemical agency comes into play.” (p. 20.) It is not otherwise with cold:—

“As long as nervous excitement can be kept up, the resistance of cold is very great. General Piroffsky informed me, that in the expedition to Khiva, notwithstanding the intenseness of the cold, the soldiers marched along, singing, with the breasts of their coats open; but only as long as they were flushed with the hopes of success. Where there is nothing to excite, and where exposure to cold takes place under the common routine of parade, its depressing effects are lamentably felt by those long exposed to it. In the time of the Grand Duke Constantine, a regiment of Horse was marched from Strelna to St. Petersburg, a distance of twelve miles and upwards. He marched at their head at a foot pace all the way. He had well wadded himself, and smeared his face over with oil. It was the gratification of a whim to expose the soldiers to a great degree of cold. They arrived at the square before the palace, and were dismissed to their barracks. The following day one-third of the regiment was in the hospital, attacked by nervous fever, of which many died. There was no stimulus of necessity in this case, but the moral feeling aggravated the physical suffering.”

We have quoted this interesting anecdote with a view particularly to the miasmatisists, and to ask them, whence came the malaria that induced the fever in one-third of these men, so wantonly exposed to a temperature probably little short of the freezing point of mercury?

We have tried for another extract upon some point that we conceive would be more particularly interesting or instructive to our readers; but, in truth, we are puzzled. We find the whole book, where Sir George Lefevre relies on himself, and does not quote from Müller, and Magendie, and Legallois, and the rest of the physiologists, alike interesting and, to the general reader instructive; and we can only refer to the whole as to a most pleasant repast. How beautiful is the short disquisition upon sleep! how tasteful that on dreams! how *piquant*, to borrow a

French word, and quietly humorous, that on instinct and reason! Sir George, like all true and kind-hearted men, is a lover of animals, and does not hold them so utterly degraded below the level of humanity as many astute and over-arrogant philosophers:—

"It is difficult," he says, p. 262, "to suppose that animals can dream upon mere instinctive powers; and yet there is no doubt of the fact of their dreaming. Memory is one of their attributes, whether sleeping or waking. The effects of liquors upon the animal's senses are the same as upon the human, though it is only the pig which seems to take pleasure in this species of recreation. The passions are all in full force among them—love, hatred, revenge, jealousy. I once saw a quail that literally died of chagrin.

"If, however, the higher powers of reason be denied to animals, they are not, on the other hand, chargeable with some of its less noble attributes.

"It is doubtful whether they possess that species of sophistry which allows man, under certain circumstances of self-deception, to make evil appear good,—and of necessity a virtue.

"If a dog were caught by the leg in a trap or gin, would he find such means of consoling himself as Hudibras did when his feet were fast in the stocks? It was then, and not till then, perhaps, that the knight understood the value of his spiritual half—the unconfinable part—the free agent:—

"Quoth he,—Th' one half of man, his mind,
Is *sui juris* unconfin'd,
And cannot be laid by the heels,
Whate'er the other moiety feels."

It was by dwelling upon the advantages of one that he lost all feeling of the other, as others have done before him. Here, then, as he himself expresses it, the *rationalia* have advantages over the *animalia*, and pursuing his system still farther, sophistry allowed him to believe that his valour was increased by his defeat.

"The rational faculties of Ralph were of a much less noble order; and mark the difference between the man and the philosopher. His mode of reasoning approaches, or rather hardly soars above that which the dog would have manifested under similar circumstances:—

"Quoth Ralph,—How great I do not know,
We may by being beaten *grow*,
But none that see, how here we sit,
Will judge us *overgrown* with wit."

The sophistry of Hudibras allowed him to glory in his captivity,—his mind soared as his body became debased. Ralph's inferior soul was downcast and mortified,—he regretted the want of that wit or cunning which (had he possessed it) might have preserved him from his disgraceful imprisonment.

"The dog might feel as much in a similar case. We say of animals that they go mad,—that they lose their senses. We say the same of our species, but we say also that they go out of their *minds*.

"This is not said of animals. There seems to be some difference between the two, if we may judge from what language implies. We never say that a man goes out of his soul,—to lose one's soul has a totally different signification.

"Soul implies, therefore, more than mind or senses; and is not the union of mind, sense, and soul, the power which constitutes human reason?"

This will suffice to give our readers a notion of the pleasant vein in which the whole book is composed. It will shew our author as a fluent writer, an apt quoter, and well-read man. Every page gives evidence of kindliness of nature; and wherever he shews himself as the physician, we see the sound practitioner, resting obviously on the sure foundation of science allied to ample experience. Let our readers get the "Apology for the Nerves" forthwith, and judge of it for themselves; if they have not already made the author's acquaintance through "The Life of a Travelling Physician," let them make it now through the no less pleasant channel of the "Apology for the Nerves."

MEDICAL GAZETTE.

Friday, November 29, 1844.

"Licet omnibus, licet etiam mihi, dignitatem
Artis Medice tueri; potestas modo veniendi in
publicum sit, dicendi periculum non recuso."

CICERO.

DISSIMILAR VIEWS OF THE PROPOSED MEDICAL BILL, TAKEN BY METROPOLITAN AND PROVINCIAL PRACTITIONERS.

"This doctrine of tyranny hath taken the deeper root in men's minds, because

the greatest part was ever inclined to adore the golden idol of tyranny in every form, by which means the rabble of mankind, being prejudiced in this particular, and having placed their corrupt humours or interest in base fawning, and the favour of present great men; therefore, if any resolute spirit happen to broach and maintain true principles of freedom, or do at any time arise to so much courage as to perform a noble act of justice in calling tyrants to account, presently he draws all the enmity and fury of the world about him. But in commonwealths it is and ought to be otherwise; for in the monuments of the Grecian and Roman freedom, we find those nations wont to heap all the honours they could invent—by public rewards, and consecrations of statues, and crowns of laurel—upon such worthy patriots; and as if on earth all were too little, they enrolled them in heaven among the Deities*.” So spoke one of our old English writers at a time when the Commonwealth of England had but lately before been little less disturbed than is the smaller community of medicine at this moment; and we are tempted to quote it now because we feel persuaded that the *spirit of centralization* is only the spirit of tyranny in another shape; and as we do not believe that any state did ever attain to true greatness or happiness under a tyranny, so do we not believe that our honourable profession of physic can ever flourish under the arbitrary domination of chance superiors.

We have been led to look at the proposed scheme of medical legislation in this point of view from having remarked the singular difference in tone and general style of observation conspicuous at the meetings of the profession held in London and the provinces. We said last week that our brethren in the

country seemed to us to see the thing rather as innocent rusticals than as sharp-sighted men of the world.

They appear so highly flattered that they have been thought worthy of his consideration by a Secretary of State for the Home Department, and that their calling, so little thought of by game preserving squires, cotton spinning manufacturers, *et hoc genus omne*, when they are *in health*, should have been thought deserving of attention in the Commons House in Parliament assembled, the House at the time consisting, be it remembered, of something under twenty members! that they have lost their head, and seem not to suspect the risk they are likely to be made to run, from what must be granted to be purely experimental legislation, calculated on no antecedent experience, irrespective of the actual state of the medical profession and the wants of the community, but based on certain peculiar views and opinions that may be sound and good, but which may also be worthless, and not more substantial nor better founded than a dream.

We will not pay our friends in the provinces the ill compliment of supposing that they are not perfectly sincere in their way of viewing the thing; what we complain of is that they do not view it aright; we will not insinuate that more than one of them had denied their presence at this or at that meeting of the profession where an opinion adverse to the Bill was likely to be expressed, because they had been limed with a twig of preferment artfully laid in their way, and to which, consciously or unconsciously, they had got fast.—No, the truth is, that we of London, who are free to think, and to speak as we think, see this legislative project in a totally different light from our brethren in the country. In fact, different classes of practitioners, both in town and country, see the matter dif-

* The Excellency of a Free State. 1656.

ferently, and judge it upon dissimilar and often totally opposite grounds.

In the metropolis we naturally look to the Colleges of Physicians and Surgeons as our heads; in the provinces, these institutions fade into comparative insignificance, and are little thought of. There has not been a meeting of the profession in the country, at which the supreme Council of Health and Education has not in itself, and without reference to its constitution, been most warmly approved of; in the metropolis, again, the Council of Health and Education is not generally relished, and we venture to say that three-fourths of the governing body, both at the College of Physicians and College of Surgeons, are decidedly opposed to it, and we, though belonging to neither of these bodies, heartily sympathize with them in their dislike of any and all such arbitrary domination. We would have our universities and our medical corporations free, not tyrannized over by any Secretary of State and his obsequious nominees. Uniformity may be a good; but it may also be an evil; the price paid for it may be more than it is worth. Our guilds and corporations are the legacy of our Saxon ancestors to us, their representatives, at the distance of a long lapse of ages, and let it never be forgotten that they have been the principal means by which the rights and liberties of the people have hitherto been preserved; they are that in fact which is most truly precious in our institutions; and they are precious because they habituate us to self-government. Let us not tamely give them up, then, nor revert to the constitution of society in the middle ages, when the burgher was nobody, but all were serfs at the disposal of the lord or petty sovereign of the district. If we have not achieved the degree of moral and mental eminence that would entitle us to a voice in the administration

of the affairs of these the corporations to which as medical men we either do or ought to belong, let us still struggle onwards in our efforts to attain it. All the world admit that we are improving, and our sons may achieve the distinction to which we have aspired in vain.

The cry that has been raised against corporations has been against the abuses of these excellent institutions; and how have the abuses crept into the administration of their affairs? because, commonalties have either had no share or only a very inadequate share, in the choice of the administrative body.

"Medical reform" as the watchword, appears, in fact, to us in London to signify one thing, and another thing in the provinces. In London, by medical reform we mainly mean the having a voice in the election of the administrative council of the college, or corporation, from which we have received our certificate of competency to practise medicine; this is what the London members of the Royal College of Surgeons especially have been contending for during so many years. But the provincial member of the Royal College of Surgeons cares not a rush about this, and by medical reform he often understands nothing more than a penal enactment against unqualified practitioners, of sufficient stringency and facility of application – fine and imprisonment on summary conviction before a magistrate, or some such trifle.

In London, what the General Practitioner insists on is, recognition by the body from which he has his diploma: he would raise himself higher than he is; he would have all the barriers that oppose his attainment of the highest places removed in the College of Physicians, but in the College of Surgeons especially; here it is a struggle for distinction; it is ambition, that "last infirmity of noble minds," that goads

him on. In the Country, the general practitioner thinks little of the College where he passed; he is beyond the sphere of its influence, and bends all his energies to achieving eminence by practice; he thinks less of his standing among his fellows; he is less ambitious in the same direction than the London man; instead of its being for name and fame, the struggle with him is rather for bread, or for its representative, money.

In London the medical profession stand on a totally different footing in society from their brethren in the country. In London we can be independent—vote for the tory or the whig, and even the radical candidate, at an election, as we incline: if we generally show deference and due respect to the clergy, which we do, we are yet never obsequious to them,—we are not afraid of the *cloth*, in short, and can always meet and speak of its wearer as he deserves; and then, if the high and mighty of the land show us the cold shoulder, which, by the by, they are occasionally very much disposed to do, why we can show them the cold shoulder in return. In the country it is all different; he who should vote for the whig candidate in one place, for the tory candidate in another, would be ruined in his worldly prospects. The country practitioner very commonly approaches the parson hat in hand; the body curer scarcely ventures to regard himself as on anything like a footing of equality with the soul curer; and as for the squire, or the great man, or great men of the district, they are truly a sort of *dii majores* to the village Æsculapius, not to be looked at without awe and reverence, and whose sovereign will and pleasure are to be received as the decrees of inevitable destiny.

In London we do not accept this Medical Bill more than we ever do any-

thing else, as the embodiment of absolute wisdom, nor with the same feeling of reverence as the Mussulman does the firman of his Pasha, which, perhaps, goes the length of making him shorter by the head; nor do we look at the thing merely in a selfish point of view, and as we are to be affected by it in our several capacities of physicians, surgeons, and general practitioners. Our country friends bow the head most dutifully in the first instance; but feeling the Right Honourable the Secretary of State's heel upon their precious necks, they by and by very respectfully suggest that certain amendments seem to them advisable; or they venture to say that they are not quite so handsomely treated as they thought they had reason to expect; or, waxing bolder as the sense of injury grows keener, they get the length of declaring that the Bill goes to the utter destruction of the class in the medical profession to which the great majority of its members belong. We have had no meeting in the metropolis at which the Bill has been spoken of by the chairman as a sort of inspired and perfect measure, whilst resolutions were passed, *nem. con.* utterly damnatory of every one of its provisions, save that of Registration, and even that found fault with because it was not compulsory!

Much of what Dr. Hastings said at the Derby Meeting of the Provincial Medical and Surgical Association, as well as the resolutions that were passed there, might satisfy us of the dim medium through which even our foremost men, our leaders in the country, see the Medical Bill. Dr. Hastings, for instance, said that the Provincial Medical and Surgical Association had asked Sir James Graham to bring in a Medical Bill, and he had done so shortly afterwards.

We are almost tempted to exclaim—

Sancta simplicitas! but that it would look disrespectful. The truth, nevertheless, is, that Sir James Graham only brought in the Medical Bill when he could keep it out no longer, and after the kibe on his heel had been repeatedly galled by the sharp toe of Mr. Macanlay, the representative of the interests of the University and College of Surgeons of Edinburgh,—a deputation from the former, and the President of the latter of which, had been in London some few weeks before, urging the thing on through their representative. Sir James Graham seems to have had an instinctive dread of the difficulty and opposition he was to encounter in legislating for the medical profession, and unquestionably hung fire as long as he possibly could.

When we travel beyond the English counties, and look to Scotland, we should say that the Edinburgh people, in their anxiety to put an extinguisher on the poor Apothecaries' Company—for which it is notorious they entertain the most sovereign contempt, mingled with a large measure of dislike—seem ready to make sacrifice of everything; of the independence of their ancient University, the *Academia Jacobi VI. Regis*, which has turned out so many doctors upon the world; of the College of Surgeons, which is an old and respectable institution, though its new building has got the dry rot in its timbers, and its funds are affected with a perfect diabetes, the outgoings far exceeding the incomings. The cry in the north is unquestionably for the *needful—rem, quocunque modo, rem!*

The Glasgow folks say little. The University there has never had great celebrity as a medical school, though it is an old and worthy place. In fact, Glasgow profits largely by the proposed measure of medical enactment. Its Faculty of Physicians and Surgeons will become a Royal College of Medi-

cine; and instead of getting nothing from the young men educated at the University there, it will rise into the licensing body, and put money in its coffers, by which it will of course become great and powerful,—money, which is the grand let or hindrance to a man's getting into the kingdom of heaven, being the one thing needful to securing consideration upon earth.

Aberdeen and St. Andrew's having given up trading in degrees, will be empowered to make bachelors, as they have heretofore made doctors, of medicine; and as a rose by any other name would smell as sweet—that is, as a bachelor's money will weigh as heavy as a doctor's, they are silent.

The Irish—the great body of the Irish medical profession, we mean—are like the Spaniards on the political map of Europe—nowhere. The Apothecaries' Company of Dublin are utterly mute, though their existence is threatened: have they, like good modern Romans, made shrift of their sins, and so prepared themselves to die? or do they sit, like worthy old Romans, in their curule chairs, composedly waiting the mandate of the Home Secretary that is to dispatch them? or,—and this is not so classical a simile,—do they admit themselves useless, and, like the cur in the same predicament, think it not worth while even to snap at the rope that is to hang them? They certainly comport themselves very differently from the Worshipful Society on this side the herring pond, who, with their "Statements," and "Addresses," and advertisements in all the daily papers, might not inaptly be likened to the pig on the morning of its demise, which very certainly lets all the neighbourhood know what is going forward.—But we must not be tempted into the light vein upon that which is really so serious; and so we close our lucubrations for the present.

MOVEMENT IN THE PROFESSION.

WE have little since our last. A meeting of the medical practitioners residing within the Hundred of Blackburn, was held on Wednesday last, and resolutions of the usual tenor were passed. The meeting felt the necessity of legislation for the medical profession; approved a Council of Health and Education, but not with the constitution of the one proposed; desired to record the strongest feeling of hostility to that part of the Bill which annulled all restrictions on unqualified practitioners; expressed the most clear and decided conviction that restrictive measures are indispensable alike in justice to the public and the profession, and that the Apothecaries' Company, by the course of study they had required, had done more to elevate the profession than any other corporate body.

A meeting of the medical practitioners of the town of Warrington was held at the Dispensary, on Tuesday evening, Nov. 22d, to take into consideration Sir James Graham's proposed Bill—Dr. Kendrick in the Chair; and after resolutions expressive of satisfaction with those provisions which were calculated to improve the character of the profession, to raise the standard of the education of its members, to establish a Central Council of Health, and the registering of all legally authorized medical practitioners,—they regretted that the Bill should allow mere pretenders to impose upon the public, and tamper with the health of the people, and expressed their opinion that a clause should be added for the purpose of effectually and speedily checking all illegal and unqualified practice.

Dr. Kendrick and Mr. Sharp were requested to confer with Mr. Blackburne, Member for the Borough, and Mr. Patten, Member for the County, on the objectionable clauses and deficiencies of the Bill, and a conversation ensued as to the best means of obtaining the objects sought for. It was finally resolved, that this meeting pledges itself collectively and individually to further the objects of the petition, by using their personal influence with the Members of Parliament in the neighbourhood, and through their friends who may have influence with those at a distance.

ADVERTISEMENT OF QUACK MEDICINES.

THE Editor of the Maidstone Gazette has fallen foul of us most unhand-somely, as we think, for merely illustrating one of the great difficulties in the way of legislating for the suppression of quackery, and the sale of quack medicines, from his own columns. We meant nothing offensive to the editor in doing so, nor did we insinuate that he was guilty of any moral delinquency in inserting such advertisements; it is customary to find them in all newspapers. He says we made too many of them; we always believed that duty was paid to government according to the diversity of items advertised, and reckoned them accordingly;—that the "Silent Friend" was one thing, the "Cordial Balm of Syriacum" a second, and the "Purifying Specific Pills" a third. But in this we may be mistaken; we are quite sure, nevertheless, that if 1s. 6d. covers the duty to government on these three items, the price of one ordinary advertisement does not pay for the half-column which their announcement occupies in the Maidstone Gazette. In so far as the revenue of the thing goes, we are sorry, for the editor's sake, that the three columns of quack advertisements, which we find in the very number of the paper in which we are so unhand-somely handled, is not four columns, as we think it must have been in the preceding number, from which we gave the particular heads. As for the other point upon which the editor attacks us, that is entirely between us and the individual referred to.

MISS MARTINEAU ON MESMERISM, AND MESMERISM AT THE SANATORIUM.

THE spirit of proselytism is a fine thing; the world would probably be a very dull place without it. The grand objection to it is, that it is commonly displayed on matters which are really of no moment in themselves; which are trifles both to society and individuals; in fact, though both society and individuals commonly enough look at them through so highly magnifying a medium that persuasion of their paramount importance becomes a canon of faith, a revelation both on outward and internal evidence. Miss Martineau had been long an invalid;

she was held, we believe, to have been labouring under organic disease of the uterus, yet happily the malady seemed slow in its progress, and if it confined her to her room, it appeared to abate little or nothing of her intellectual energy. We have at least one delightful work from the able pen of Harriet Martineau since she became a sufferer—we allude to “Life in the Sick-Room”—a book full of exalted philosophy, teeming with the truest spirit of piety and philanthropy. The disease of our gifted countrywoman, thank God! seemed slow to kill, and finally—and here we again say, thanks be to God!—it seemed to have come to a stand still.

“This is not the place in which to give any details of disease,” says Miss Martineau, (Atheneum, Nov. 23rd) “it will be sufficient to explain briefly, in order to render my story intelligible, that the internal disease under which I have suffered appears to have been coming on for many years; that after warnings of failing health, which I carelessly overlooked, I broke down while travelling abroad, in June 1839;—that I sank lower and lower for three years after my return, and remained nearly stationary for two more, preceding last June. During these five years, I never felt wholly at ease for one single hour. I seldom had severe pain; but never entire comfort. A besetting sickness, almost disabling me from taking food for two years, brought me very low; and, together with other evils, it confined me to a condition of almost entire stillness,—to a life passed between my bed and my sofa. It was not till after many attempts at gentle exercise that my friends agreed with me that the cost was too great for any advantage gained: and at length it was clear that even going down one flight of stairs was imprudent. From that time I lay still; and by means of this undisturbed quiet, and such an increase of opiates as kept down my most urgent discomforts, I passed the last two years with less suffering than the three preceding. There was, however, no favourable change in the disease. Everything was done for me that the best medical skill and science could suggest, and the most indefatigable humanity and family affection devise: but nothing could avail beyond mere alleviation. My dependence on opiates was des-

perate. My kind and vigilant medical friend,—the most sanguine man I know, and the most bent upon keeping his patients hopeful,—avowed to me last Christmas, and twice afterwards, that he found himself compelled to give up all hope of affecting the disease,—of doing more than keeping me up, in collateral respects, to the highest practical point. This was no surprise to me; for when any specific medicine is taken for above two years without affecting the disease, there is no more ground for hope in reason than in feeling. In June last, I suffered more than usual, and new measures of alleviation were resorted to. As to all the essential points of the disease, I was never lower than immediately before I made trial of Mesmerism.”

Few medical men of any experience will have the slightest difficulty in perfectly comprehending the state so graphically described by the sufferer. It is seen every day in women at the turn of life; and the grand mistake that is ever committed in regard to it is to look on mere functional derangement, accompanied by pain and excessive discharge, as organic disease—as cancer or polypus of the uterus. We are not fond of putting our brethren in the wrong in the *MEDICAL GAZETTE*; but if Miss Martineau's case were diagnosed as either cancer or polypus, and she recovered, even with the assistance of mesmerism, without a separation, naturally or artificially brought about, of the diseased parts, in either case, the first position we take up is that her medical advisers were mistaken in their view of the nature of her malady; that the disease was functional, not organic, and that the patient would have recovered—was in fact recovering, independently of mesmerism. There are curative means not suspected of the vulgar, of sovereign efficacy in such a complaint as that under which Miss Martineau laboured—*rest and time*. And we beg to assure her that *there is no “specific medicine”* for the malady with which she appears to have been mistakenly supposed to be affected, nor yet for that with which she was probably affected in fact—or if there be, it is a combination of the very remedies under the prolonged use of which she has most happily, as she says been “restored to the full enjoyment of active

days, and nights of rest, to the full use of her power of body and mind :” the remedies alluded to are *rest* and *time*.

Much of course will be made of Miss Martineau's case by the mesmerists—it is a successful one; it will be put into the mouth of rumour with the hundred tongues, and bruited over the length and breadth of the land. We do not observe that our friends the mesmerists are more candid than other enthusiasts and proselyte-makers; when they fail they say nothing of their failures; they are only loud when they succeed; like the lithotomists of old, who vaunted loudly enough their fortunate issues, but left the sod undisturbed that covered the dead men's ashes. The mesmerists tell us of the cases in which limbs have been amputated and breasts removed without the privy of the patient; they say nothing of the cases in which their *passes* and manœuvres had no influence in diminishing pain or locking up the senses in unconsciousness. A case of this kind, however, has just occurred at the Sanatorium, and we who are no mesmerists venture to make it known in its general features: Admission into the Middlesex Hospital was sought for a patient affected with a disease of the mamma, which, as being

deemed of an incurable nature, was believed to require extirpation. The patient, however, having friends among the mesmerists, they wished that she should enter the hospital on the understanding that they should be allowed to practice upon her, as well as the surgeon under whose immediate charge she was to be placed. This was objected to on the part of the surgeon, who, as officer of a public institution, did not feel himself warranted in countenancing any procedure in the efficacy of which he did not believe, and which was matter of dispute with the profession at large. He had no objections to the mesmerisers exercising their art on the patient; the breast ought to be removed; he was ready to remove it, the patient being in the mesmeric sleep; but he would not commit his public office to a measure the efficacy of which was generally discredited.

The patient was therefore removed to the Sanatorium; she was well mesmerised, and Mr. Arnott removed the breast. The operation was performed with rapidity and precision; yet not without the poor patient giving sufficiently obvious and distressing indications, both by movement and voice, of the pain she endured.

DR. GUY'S DEFENCE.

To the Editor of the Medical Gazette.

SIR,

I LOSE no time in appearing at the tribunal before which your reviewer has summoned

Taylor (p. 21.)

“Habit, it is well known, diminishes the effect of certain poisons:—thus it is that opium, when frequently taken by a person, loses its effect after a time, and requires to be administered in a much larger dose. Indeed, confirmed opium eaters have been enabled to take at once, a quantity of the drug which would have infallibly killed them, had they commenced with it in the first instance. Dr. Christison has remarked that this influence of habit is chiefly confined to poisons derived from the organic kingdom; and I quite agree with him, in thinking that the stories related of arsenic eaters, and corrosive sublimate eaters, are not to be credited. *There is no proof that any human being has ever accustomed himself, by habit, to take these substances in doses that would prove poisonous to the generality of adults. The only form in which I have known the*

me, and boldly plead “not guilty” to the charge.

Before I enter formally upon my defence, I must request the favour of your placing side by side the passages quoted in the review, supplying the omissions, which I have marked in italics.

Guy (p. 401.)

“*Habit.*—This has the effect of diminishing the influence of poisons derived from the vegetable kingdom, but of increasing that of mineral poisons. Thus, while opium, alcohol, and tobacco, lose their effect by repetition, and may be taken at length in doses which would poison a man not accustomed to their use, arsenic and the preparations of mercury produce more effect the longer they are taken. *To this general rule, however, there are marked exceptions; for, on the one hand, digitalis and strychnia, like arsenic and mercury, have a cumulative effect; and on the other hand, the less deadly mineral poisons, such as zinc and antimony, may be taken by healthy persons in continually increasing doses. It must be borne in mind, however, that even those substances to the action of which the system most readily adapts itself,*

question of habit to be raised in medical jurisprudence is this: whether while the more prominent effects of the poison are thereby diminished, the insidious or latent effects on the constitution are at the same time counteracted. The answer is of some importance in relation to the subject of life-insurance:—for the concealment of the practice of opium-eating by an insured party has already given rise to an action, in which medical evidence on this subject was rendered necessary. As a general principle we must admit, that habit cannot altogether counteract these insidious effects of poisons; but that the practice of taking them, is liable to give rise to disease, or impair the constitution."

I would submit these passages to the candid judgment of your readers, and ask whether they can detect anything approaching to plagiarism in that extracted from my work. Both passages treat of familiar facts, both of them use familiar illustrations; but here the resemblance ceases. The entire passage is not only widely different from that quoted from Mr. Taylor's Manual, but though brief, may fairly claim to be more full, more definite, and as far as originality is possible in such a matter, more original.

Christison (p. 28.)

"On the contrary, the tendency of *habit* when it does affect their energy, is, with a few exceptions, to lessen it. By the force of habit a person may take without immediate harm, such enormous quantities of some poisons as would infallibly kill an unpractised person, or himself when he began. There have been opium-eaters in this country, who took for days together, ten ounces of laudanum daily."

In contrasting these two paragraphs, I am far from wishing to bring against Mr. Taylor the odious accusation which has, in my own case, been built upon so slender a foundation. I merely contend, that there is a much closer resemblance, both of matter and words, between these two passages, than between those of which you have made, as I think, so mistaken a use. If I am to be condemned on such grounds, Mr. Taylor cannot escape your censure; but the imputation would be as unjust in the one case as in the other.

Before I leave this part of my defence, I cannot but express my regret that the passage of which a part only was extracted from my work, had not been quoted in full. The parts that have been omitted are precisely those which give a character of individuality to the entire extract. In reference to this part of the charge, I have only to add my unqualified denial of the justice of the imputation it is intended to convey.

produce permanently injurious effects on the system. Thus, alcohol causes disease of the lungs, liver, kidneys, and brain; tobacco, however frequently repeated, still excites the circulation, and opium raises the spirits, and gives increased activity to the mind."

If such very distant resemblance as exists between the opening of these two paragraphs is to be taken as proof of plagiarism, no author who has ever written can hope to escape from such a charge. I would illustrate this position by placing side by side a part of the above passage from Mr. Taylor's Manual, and a short paragraph from the standard work of Dr. Christison.

Taylor (p. 21.)

"Habit, it is well known, diminishes the effect of certain poisons:—thus it is that opium, when frequently taken by a person, loses its effect after a time, and requires to be administered in a much larger dose. Indeed, confirmed opium eaters have been enabled to take at once a quantity of the drug which would have infallibly killed them had they commenced with it in the first instance."

I shall now examine seriatim the principal accusations brought against me by the reviewer, and I shall use my best endeavours not to misunderstand or misstate them. It appears that my accuser had no sooner dipped into my work, than he "became strongly possessed with the idea, that he had already read the book; the very turn of the language and phrases employed, struck familiarly on his eye," "every illustration seemed as familiar to him as the face of an old friend," and he exclaimed, "we have read all this before." He then proceeds to confirm his impressions by placing the two books before him, and conning them "paragraph by paragraph, page by page," and arrives by this laborious process at the conclusion, "an apple cleft in two, is not more twin: one face, one voice, one habit, and two persons—a natural perspective, that is and is not!"

I cannot hope, by a simple assertion, to rebut this very grave accusation. I must,

therefore, at the risk of occupying more space in your valuable pages than you can well afford me, and of wearying your readers, beg permission to contrast two passages treating of the same subject, that your readers may judge for themselves, by a single example, of this asserted resemblance of

Taylor (pp. 19 and 20.)

"Thus then, I think, we may draw these conclusions:—1. That the remote influence of poisons is sometimes conveyed through the medium of the blood. 2. That it may be conveyed by contact with the sentient extremities of nerves, probably of the ganglionic system. 3. That some poisons may act in both ways at different times." "Those who advocate the theory of absorption, in opposition to that of sympathy, suppose that they thereby account for the cause of death; but nothing can be more unfounded. Admitting that every poison entered into the blood, it would yet remain to be explained how it operated when there, to destroy life. Whether the poison be in the midst of the blood in an external wound, or circulating in an artery or vein, it kills, and the last mentioned theory has at least the advantage of affording an analogical explanation of the mode in which the fatal impression is conveyed, in the two cases."

These are solitary passages, but I am willing that the entire chapters from which they are taken should be compared, and I confidently assert that in style, arrangement, mode of illustration, and general views, there is as marked a difference as it is possible to meet with in any two authors writing on the same subject, and consulting the same authorities. The arrangement of the chapter is as nearly as possible that sanctioned by the high authority of Dr. Christison, from which I saw no good reason materially to depart.

I am far from laying great stress on a comparison of isolated passages, and I should not attach much importance to a score of them; but a single comparison may serve to show the injustice of the sweeping censure of the reviewer. It is something to prove my independence even in a single instance; and I am sure that any one who will take the pains to contrast Mr. Taylor's view of the *modus operandi* of poisons with my own, will admit that there is as much difference in the style, arrangement, and conclusions, as the most captious critic could desire.

Following my reviewer step by step, I must now correct an error, which, though unimportant in itself, is thrown into the scale against me. "We remember," he says, "Mr. Taylor deeply versed in medico legal lore, when Dr. Guy could have been little more than a school-boy—nothing

style and matter. They both refer to the *modus operandi* of poisons, and I select them because the extract from my own work is taken from the very chapter which contains the passage already cited, and is separated from it only by two pages.

Guy (p. 399.)

"The theory, then, of the absorption of poisons, and their application by means of the blood to the organ on which they produce their fatal effect, is one firmly established by experiment, and, probably, admitting of universal application. In order to prove the possibility of an immediate effect upon the nerves, independent of absorption, it would be necessary to guard against the access of the poison to the lungs; and if, after this precaution, the effects should be found to manifest themselves in less than three or four seconds, the possibility might be admitted. Till such an experiment has been performed, the theory of absorption must be held to explain the fatal effects of poisons, and the theory of the action of poisons by sympathy, or in other words, through an influence directly communicated by the nerves, must be rejected."

more than a medical student, certainly;" and he then proceeds to insinuate that having attended Mr. Taylor's lectures at Guy's Hospital, taken copious notes, and put into successful practice my own suggestions for the keeping of a common-place book, (which, by the by, are most strangely and perversely misrepresented,) I have concocted my Third Part out of the said notes, and extracts from the Manual, with some few interpolations from Dr. Christison's work on Poisons.

Now the real facts of the case are these. Some seventeen years since, Mr. Taylor and myself were fellow-pupils at Guy's Hospital, in attendance upon the same course of lectures. He was my senior both in years and standing as a pupil, but as he was not then a lecturer on Medical Jurisprudence, I did not at that time enjoy the advantage of his instructions. My obligations to Mr. Taylor are of a much more recent date. Some of your readers are aware that in the summer session, immediately succeeding the lamented death of my predecessor, Dr. Fergus, Mr. Taylor delivered a course of lectures at King's College. These lectures I attended, but without taking notes. I had, moreover, through Mr. Taylor's kindness, the additional advantage of attending a course of his familiar demonstrations in Toxicology, at Guy's Hospital, and of these I did take some very short, but useful notes, referring almost

exclusively to the tests for poisons. To say that I have not profited by these opportunities would be to convict myself of inattention, but the advantage I derived from them was not of the kind supposed in the review. They were of some slight assistance in the preparation of my lectures, but they form no part of my work. For any merit which either may possess, I am chiefly indebted to the admirable treatise of Dr. Christison, to which I have acknowledged my obligations in the preface, and by very numerous quotations and references in the body of the work. These, I presume, are the few interpolations to which the reviewer refers.

If, then, in preparing the third part of my work for the press, I have laid myself under obligations to Mr. Taylor, it is by the use I have made of his Manual. Now, I not only do not intend to deny having made use of Mr. Taylor's Manual of Medical Jurisprudence, but I make no secret of having, as I was bound to do, used it extensively. And I have done so in the very face of a threat which might have well deterred a timid person from touching it. I knew that what I was about to publish would have to undergo the ordeal to which it has been submitted, that it would be minutely scrutinized with a view to discover parallel passages, and so-called plagiarisms, and that I could only escape censure by foregoing the benefit of Mr. Taylor's labours. I had no difficulty in making up my mind to the course I should adopt. Mr. Taylor's work abounds in valuable facts which have come under his own notice, or have been communicated to him by others, and in cases extracted from the Foreign Journals. The tests for poisons are also given at considerable length, and with much minuteness, and the entire subject of Toxicology is treated in such a manner as to make a frequent reference to it incumbent upon every succeeding writer on the same subject. Such being the character of Mr. Taylor's work, I should have been chargeable with neglect if I had not made use of it. Accordingly I have quoted several cases, with due acknowledgment, and that I might display my obligation to the full, have given him the credit of bringing together several cases to which without much loss of time I might have referred. As such a course might have laid me under the imputation of making an undue use of another's labours, I have preferred in this, as in many other instances, to quote the author who first made such cases our own. This, then, is one use I have made of Mr. Taylor's work; and in this, at least, I am not guilty of omitting the due acknowledgment. I have also referred to Mr. Taylor's work in the expectation of finding additions to our tests for poisons, which it would be necessary to notice; but as, in my opinion,

he has not been fortunate in this respect, I have been under no temptation to appropriate his discoveries. I certainly was not aware that the effect of the application of heat to the arsenite of copper was claimed by or for Mr. Taylor, as a discovery which required acknowledgment at my hands. That property of the arsenite of copper, as well as the sublimation of the metal on applying heat to the mixture of that substance with charcoal, is stated in p. 264 of Dr. Christison's work. I was, therefore, under no necessity of resorting to the Manual. The oversight which I have committed proves of how little importance I deemed the test, for a moment's consideration would have sufficed to show that a ring of metal could not be procured from a combination of arsenious acid with a base; and that this is a mere oversight is proved by a reference to page 465, in which I state that arsenite of copper, when heated with charcoal, yields a metallic sublimate.

In the paragraph which immediately follows the claim of originality set up for Mr. Taylor relative to the effect of heat on the arsenite of copper, the reviewer, with a view of strengthening his position, finds fault with me for not correcting a deficiency in Mr. Taylor's Manual which does not exist. I presume that it was not Mr. Taylor's intention to save his readers the trouble of calculating for themselves the quantity of any one of the salts of lead that must have existed in a fluid from which a certain number of grains of sulphuret of lead have been procured. The calculation is not of surpassing difficulty, the necessary data are to be found in any chemical book, and I should not despair of being able to work any problem of the sort, with which the reviewer may please to favour me. I have not yet quite forgotten the simple rule of three, nor am I altogether ignorant of the fact, that "the question in a case of poisoning is never as to the quantity of metallic lead in a salt, but as to the quantity of the poisonous salt that has been administered." Such stupidity is scarcely to be expected in one who has the gift of imitating with success the style of other writers, and of "disguising the parentage of his matter, arrangement, and conclusions."

I shall take this last sentence, with one slight addition, as embodying the substance of the charge brought against me. I am arraigned for using the words, and borrowing the matter, arrangement, and conclusions of my work, from Mr. Taylor, without acknowledgment. I have already pleaded not guilty to the first two counts of the indictment, and I now assert my innocence as to the last two. The arrangement of the entire Part coincides very closely with that adopted by Dr. Christison, and has been little influenced by my perusal of Mr. Taylor's work,

or my recollection of his lectures. That of the several chapters is exactly such as I have adopted in the first two parts of my work, which were published before Mr. Taylor's Manual, and the order in which the several tests are placed is one peculiar to myself, and which I have always followed in my lectures. The conclusions at which I have arrived are also widely different from, and sometimes diametrically opposite to, those of Mr. Taylor. If it had been possible to treat the facts of chemistry as subjects of dispute, or to display originality in chemical equivalents, I should have had a better chance of escaping the censures of the reviewer; but unfortunately the difference between one author and another in treating such matters must be necessarily very slight.

To conclude, I have no wish to underrate my obligations to Mr. Taylor, or his Manual; but I do most emphatically deny that I have made an undue use of the knowledge which I have derived from either. In the third, as in the two former parts, I have done ample justice to his labours, and have not intentionally omitted the acknowledgment of my obligations to him. I repel with indignation the unjust charge of my reviewer, and accuse him of treating me with gross injustice. He has, according to his own statement, read the third part of my work paragraph by paragraph, and page by page, and yet he has the shameless effrontery to state that it is nothing more nor less than a condensation or abridgment of the corresponding part of Mr. Taylor's work. He has examined the two books minutely, but has wilfully failed to discover in them any difference of arrangement, or any opposition of sentiment. Down to the very style all is one piece of unmitigated plagiarism. He has not thought fit to notice the wide difference between the views of Mr. Taylor and myself, as to the *modus operandi* of poisons, nor the laborious analyses of cases "taken at the source, and not at second-hand," and establishing general results of which I have already had one opportunity of testing the importance. The chapter on arsenic, containing the most extensive analysis of cases on record; a new, and, as I think, not unimportant suggestion for distinguishing the crusts of arsenic and antimony; a description of their differences founded upon repeated experiment, and calculated to modify the statements of Mr. Taylor concerning them; and a strongly expressed doubt of the value of one of the few new tests proposed by him; is not even mentioned. The peculiar and distinct arrangement of the tests for poisons, and indeed every indication of labour, thought, and originality to be found in the book, is passed over in studied silence, lest it should weaken the force of this most unjust and odious accusation.

There may be a difference of opinion as to the extent to which one author is allowed to make use of the work of another; but there can be but one opinion as to the conduct of a reviewer who thus wilfully omits every qualification of a charge which a sense of justice and common humanity alike require to be stated with all its limitations. In my own name, and on behalf of every living author, I protest against the course which your reviewer has chosen to adopt. If it is allowable to assert without a shadow of proof that even the very style of an author is but the transcript of some contemporary work, what shall prevent this charge from being flung back with fearful effect at the reviewer himself? It is not the least inconvenience of anonymous writing, that while it exposes an innocent man to the safe attacks of an enemy or a rival, it creates suspicion as to the person of the writer himself, which, if the review is more than usually severe and one-sided, never fails to attach to the party who may be supposed to have the greatest interest in the attack. In committing one injustice, you open the door for a thousand.

I have now obeyed your summons, and if what I have written is of inconvenient length, I would remind you of the wide difference that there is, and must be, between an accusation and a defence. I request the insertion of this letter as an act of justice, and I trust that you will not deem the terms of my reply stronger than the occasion warrants. If you should be inclined to think them uncourteous, I beg you to peruse once more the review which has called them forth.

I have the honour to be, sir,

Your obedient servant,

WILLIAM A. GUY.

15, Bloomsbury Square,
Nov. 18th, 1844.

[We are very far from having any desire to put Dr. Guy irrevocably in the wrong; on the contrary, we would fain see him place himself in the right. Did his explanation prove satisfactory to Mr. Taylor and to the profession, we should not be behind-hand in withdrawing the charge of literary plagiarism made in our pages, and of making Dr. Guy the *amende* in behalf of our reviewer.—ED. GAZ.]

VACCINE LYMPH.

To the Editor of the Medical Gazette.

SIR,

I HAVE during the last summer experienced much difficulty in obtaining active vaccine virus; through the kindness of a friend I have at length obtained some, with which I am now vaccinating the paupers of a large parish. The effects have proved very satisfactory; the vesicle is well defined; the

subsequent areola extensive; the axillary glands are for a time painful, and the general constitutional symptoms well marked. My object in addressing you is to state, that having now, and hoping to have for some time to come, a tolerably good supply of this lymph, I shall be most happy to furnish with a portion of it any of your readers who may choose to apply for it. A similar notice inserted in the Provincial Medical and Surgical Journal a few weeks since, produced me sixty applications. Experience induces me to suggest to those gentlemen who may avail themselves of this offer, that it would save me much trouble, and some little expense, were a pre-paid envelope, ready directed, to be enclosed to me.

It is very desirable that the inefficiency of the virus supplied of late by the National Vaccine Establishment, Rupert Place, Fitzroy Square, should be taken up, and commented upon in the way which its importance deserves: it was a subject of complaint with three out of four of the late applicants for lymph; and my experience quite coincides with theirs.

Yours obediently,
THOS. P. FERNIE.

Kimbolton., Hants,
Nov. 23rd, 1844.

[We also observe by *Casper's Wochenschrift*, of Oct. 5th, that Dr. Bremer, Director of the Vaccine Institution of Berlin, has a supply of *original lymph* from the cow, with which he is ready to furnish applicants from home and abroad through post-paid letters addressed to him.—ED. GAZETTE.]

LACERATION OF THE RECTUS FEMORIS MUSCLE.

I WAS called to a baker, about 50 years of age, who had slipped in coming down a stair with a measure of corn in his hands, the edge of which, in the effort he made to save himself from falling, he had pressed rather than struck violently against his thigh some short distance above his knee. He only reached his home with the greatest difficulty, dragging the injured limb behind him. On examining it, the integument and bone were found uninjured, but there was a distinct gap or depression, 1 inch in breadth, and by $\frac{1}{2}$ inch in length, in the thigh, over the knee: the rectus femoris was obviously torn through in this situation, and its belly lay contracted upon the anterior aspect of the thigh. The pain was trifling even when the limb was flexed and extended, but the patient could neither extend his limb himself nor stand upon it. The limb was put into a position calculated to relax the muscles in front of the thigh in the greatest degree, and the belly of the muscle was pressed down by

means of bandaging as much as possible. Not a trace of inflammatory reaction supervened, and the patient was soon in a condition to get about again with the help of a stick; by and by he recovered completely.”
—*Dr. C. Kohler, Medicinische Zeitung*, No. 22, 1844.

MELANCHOLIA PUERPERALIS ATTONITA.

A FEMALE in her first confinement had the misfortune to *overlie* her four days old infant, and in addition to her own distress, was scolded unmercifully by her husband, a violent man. The change that came over the poor woman was so great and sudden, that on my entrance into the room I saw death in her features. Her consciousness was intact, she had no fever; the vegetative functions appeared all to be unaffected; but the expression of the countenance was sorrowful, suffering, and yet indifferent—indescribable, but which once seen can never be forgotten. My unfavourable prognosis was not believed: the patient was comfortable, and they sent for another physician, who prescribed antiphlogistic means, apprehensive of puerperal fever, and then, when the powers of life began suddenly to fail, cordial and stimulating remedies; but all in vain; in three days the patient was a corpse.

This was no case of puerperal mania, nor yet of puerperal typhus; the cause of the mischief, as I apprehend it, lay in a kind of paralysis of the sensorium commune; not material, but mental, and striking at the very roots of life. I saw that we were without means of dealing with so serious a mental impression as had here been made. Although there is little in a name, yet I have ventured to propose one for this form of mental disease; or if the reader prefers it he may say that the patient died of a broken heart.—*Dr. Lion, in Casper's Wochenschrift*, No. 33.

OVARIAN DROPSY, DISCHARGING ITSELF BY THE UMBILICUS.

A WOMAN, 23 years of age, had suffered for two years with dropsy of the right ovary. When the swelling had increased to a great size, the parts around the navel began to get hard; the navel itself projected, and finally gave way, upon which, and for a long time afterwards, there followed a discharge of purulent lymph, accompanied with a notable and progressive diminution of the abdominal enlargement. Shortly after her recovery this woman married, became pregnant, and gave birth to a strong boy. After delivery the abdomen did not shrink in the usual degree; by and by, on the contrary, it increased in size again, which increase was found owing to an ovarian dropsy, which

went on augmenting in size, and at length terminated in the formation of an abscess as on the former occasion.—*DR. LAMBRECHT, Medicinische Zeitung, No. 30, 1844.*

AMNESIA COMPLICATING ACUTE RHEUMATISM.

A GENTLEMAN, by exposure to cold, contracted a fixed rheumatic pain in the neck, for which he only sought assistance eight days after the commencement of the attack. He had already been subject to rheumatism, but had always recovered without medical assistance till now. He was ordered dry cupping over the part affected, and fifteen drops of colchicum wine every two hours. He was also desired to keep himself warm; but having, instead of this, exposed himself anew to cold, I was required to visit him several times on the next succeeding days, on account of several new and rather alarming symptoms, which led me to infer a metastasis of the rheumatism to the membranes of the brain. The patient could only utter, with extreme slowness, and stammering all the while, a few unconnected words, and had no power to name the articles of every-day life that were set before him, such as a book, a knife, a pen, &c.; the patient, nevertheless, could write their names down, and appeared perfectly to understand all the questions that were put to him concerning them. When the name of any thing placed before him was given him, he could also repeat it readily enough. The motions of the tongue appeared to be unaffected. The application of eight cups, with scarification behind the ears, succeeded by a blister, completely removed this condition. The rheumatism reappeared in the neck, and required further treatment.—*DR. LINSEM, in Medicinische Zeitung, No. 20, 1844.*

GUY'S HOSPITAL.

Mr. John Hilton, Lecturer on Anatomy and Physiology at Guy's Hospital, has been appointed Assistant-Surgeon to that Institution.

NEW GERMAN WORKS.

Fickel, W., Schoonlein's Klinck u. Lehrmethode, 8vo. Buxen.

Foerg, A., Beiträge zur Kenntniss v. innern Bau des menschlichen Gehirns. 8vo. Stuttgart.

Krohn, A., Anatomisch Physiologische Beobachtungen über die Sagitta Bipunctaria. 4to. Hamburg.

Oestcrlein, Fr., Handb. der Heilmittellehre. 8vo. Tübingen.

Osiander, F. F., Hebammenbuch. 2te. Aufl. 8vo. Tübingen.

Osiander, F. F., Volksarzneimittel. 3te. Aufl. 8vo. Tübingen.

APOTHECARIES' HALL.

Gentlemen who have obtained Certificates,
Nov. 21.—John Rider, Crudgington, Salop.
—Charles Joseph Tomkins, Abingdon, Berks.—Abraham Haskins, Wood Villa, Staffordshire.—Frederick Gaunt, Aloe-church, Worcestershire.—Henry Smith Palmer.—Thomas Watts, Frampton, Gloucestershire.—Leopold Beharrill Fox, Teignmouth, Devon.

MORTALITY OF THE METROPOLIS.

Deaths from all causes registered in the week ending Saturday, Nov. 16.

ALL CAUSES 1072
SPECIFIED CAUSES 1069

I.—Zymotic (Epidemic, Endemic, and Contagious) Diseases, 255; among which, of—

Small Pox	51
Measles	25
Scarlatina	84
Hoopmg Cough	23
Croup	7
Thrush	4
Diarrhœa	13
Dysentery	2
Cholera	1
Influenza	2
Typhus	32

II.—Dropsy, Cancer, and other Diseases of uncertain or variable Seat 101; among which, of—

Inflammation	1
Dropsy	24
Scrofula	3
Cancer	16
Atrophy	7
Debility	21
Sudden Deaths	17

III.—Diseases of the Brain. Spinal Marrow, Nerves, and Senses, 154; among which, of—

Hydrocephalus	25
Apoplexy	24
Paralysis	23
Convulsions	47
Insanity	1
Delirium Tremens	4

IV.—Diseases of the Lungs, and of the other Organs of Respiration, 300; among which, of—

Pneumonia	101
Hyd. thorax	9
Asthma	18
Phthisis or Consumption	112
Diseases of the Lungs, &c.	23
Diseases of Heart and Blood-vessels	38

V.—Diseases of the Stomach, Liver, and other Organs of Digestion, 63; among which, of—

Teething	10
Gastritis	2
Enteritis	11
Tabes	10
Hernia	3
Disease of Stomach, &c.	6
Disease of Liver, &c.	8

VII.—Diseases of the Kidneys, &c.

VIII.—Childbirth, Diseases of the Uterus, &c. 20; among which, of—

Childbirth	14
Disease of Uterus	5

IX.—Rheumatism, Diseases of the Bones, Joints, &c.

Joints, &c.	7
X.—Diseases of Skin, Cellular Tissue, &c.	2

XI.—Old Age

Old Age	69
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XII.—Violence, Privation, Cold, and Intemperance

Violence, Privation, Cold, and Intemperance	51
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WILSON & OOLIVY, 57, Skinner Street, London.

THE LONDON MEDICAL GAZETTE,

BEING A
WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

FRIDAY, DECEMBER 6, 1844.

LECTURES
ON THE
NATURE AND TREATMENT OF
DEFORMITIES,

*Delivered at the Bloomsbury Square
Institution.*

BY R. W. TAMPLIN, F.R.C.S.E.
Surgeon to the Institution.

*Deformities of the knee-joint—Genu valgum
or knock-knee—Genu valgum with out-
ward inclination of the opposite knee—
Genu valgum with curvature of the bones.*

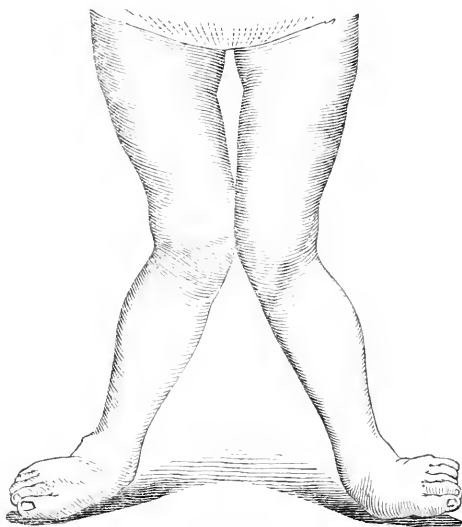
TO-DAY, gentlemen, we shall proceed to the consideration of the deformities, or malpositions, to which the knee-joint is liable; the first or most simple form of which is that known by the name of genu valgum, or knock-knee. This deformity is met with at all ages, from infancy to maturity, but rarely, if ever, in the prime or in the decline of life—at least not singly. It consists in a relaxation and elongation of the internal lateral ligament, and the crucial ligament must also yield more or less; for in the healthy or normal condition of the joint these ligaments admit of the smallest possible amount of lateral motion. This appears to be the primary condition; and if you will direct your attention to the position of the joint, and observe that it is at a distance from the point or points of pressure in walking or standing, you will easily perceive that if the superincumbent weight of the body is thrown in any but a perfectly straight direction, with regard to the axis of the joint, if the tibia on which the femur rests is in an oblique lateral direction instead of a perfectly horizontal one, corresponding with the articular surfaces of the condyles of the femur, that this bone must press, in walking or standing, in an indirect and abnormal position, producing thus mechanically an increase of the deformity, of whatever kind it may chance to be; and when the foot is felt to incline outwardly, and the

knees commence to touch each other, the malposition, as a rule, becomes daily increased in proportion to the extent at which the feet are separated from each other; the greater the distance, according to a principle in mathematics, the more powerful will be the effects of pressure occasioned by the weight of the body, and the more rapid the increase of the deformity. The deformity is non-congenital—at least I have never seen a congenital case, nor can I imagine how it could occur, provided we admit that congenital distortions arise from malposition in utero. The general cause is debility, and the specific causes the effects of dentition, the various eruptive diseases to which all children are liable, also whooping-cough (in children). In youth, the cause generally assigned is carrying heavy weights, or standing for hours in one position; but although these are perhaps the immediate causes, general debility is the primary or remote one: for in whatever circumstances of life we meet with it—and it occurs in all, but more especially in the lower class—an unhealthy constitution generally exists, or has done, during its early stage. It is by far the most common deformity met with, excepting rachitic curvature of the bones, with which it is frequently combined, and occurs, as I have said, at all ages up to the adult stage. It exists alone, but very frequently, nay, it almost invariably, will be found combined with the tibia and fibula, and occasionally the femur also, thus showing the general state of the patient's constitution: occasionally it is single, or confined to one of the knee-joints; more frequently it is double, in which both are affected, and generally one more severely than the other. At other times, it is combined with outward inclination of the other knee-joint, thus giving the patient a most curious appearance in walking of one joint running after the other, the two joints forming an angle more or less acute. It is very frequently combined with spurious valgus, which owes its origin to the oblique

position of the articular cavity of the ankle-joint, occasioning a constant stretching and consequent yielding of the deltoid, or internal lateral ligament—the pressure being exercised on the inner portion of the transverse

arch of the foot: the ligaments connecting the arch (and which I mentioned to you when speaking of talipes valgus), also stretch, and allow it to sink, and then to form a flat foot, (Fig. 1.) In the early stage, then, you

FIG. 1.



An illustration of knock-knees taken from a child aged 6 years, in which the eversion and flattening of the feet was most severe, as may be observed.

have this yielding or debility of the ligaments of the knee unattended with any additional obstacle; as the deformity continues, you will find the biceps, flexor femoris, from being constantly somewhat shortened, offer more or less resistance, which resistance becomes proportionably increased according to the length of time it has existed, on the one hand; the state of health of the patient on the other; so that even in children you will find this muscle, together with the fascia lata, to which the vastus externus is attached, exceedingly rigid and tense upon any attempt to place the leg forcibly in a straight line; the whole of the deformity existing independently of, and unaccompanied with, any disease in the articulation, ligaments, or muscles attached; unless, indeed, debility be considered as a disease. You frequently have, also, the large tumid abdomen, indicating an unhealthy state of the secretion, and symptoms of mesenteric disease. When the deformity exists to any extent, the internal condyle of the femur pressing much inwardly, the leg presents an unsightly appearance, because the gastrocnemius does not follow the position altogether, but recedes from the tibia and femur on the internal side, and passes in a more direct line to its origin, thus giving the internal condyle of the femur an appearance of increased size, and more full development than is natural: this effect is not, I believe,

actually produced. I have been consulted, from this very circumstance, by parents whose children had this deformity. They imagined that an actual enlargement had taken place, whereas the appearance arose from the cause mentioned, and from the children having grown rapidly with a diminished development of the muscular system generally. There is also an enlargement of the tubercle of the tibia frequently met with, and occasionally to a great extent, giving it the appearance of an exostosis, and forming quite a sharp point at its extremity, as if protruding from the skin, and almost leading to the supposition that a separation of the epiphysis had taken place, which I cannot imagine actually to occur; nor can I divine the cause; I only know that it is so, and that this also adds to the deformed appearance, and frequently occasions more anxiety to the parent than the deformity itself. It is not, however, of any moment, only requiring to be protected from pressure during the treatment; for I need not tell you that a spicula of bone would, with a very small amount of pressure, occasion a wound in the skin. The tibia and fibula will be found conjointly curved, with this affection, outwards, forwards, or inwards; very frequently the last. The tibia appears perfectly straight in its two upper thirds, and then diverges outwardly, so that when the knees are brought into their proper position

the feet will remain two inches, or more, apart. A child thus affected, excepting only on the first onset, presents a very awkward appearance, and walks in a most irregular and unsteady manner of necessity, as from the weakness and relaxed condition of the ligaments of the knee and ankle-joints he possesses no steady support or fulcrum on which the moving power can act; and instead of the leg being planted firmly on the ground the moment that it is brought forward, and placed in the position in which the extensors and flexors could act upon it, during the effort made to progress, and when the weight of the body is thrown upon it, the joint, or joints, yield more or less, according to the severity of the deformity, and thus occasion the irregular and unsteady motion of which I spoke; for at no time are the joints kept in their proper position, or restrained with their natural, healthy firmness; added to which, when the deformity is severe, one knee overlaps the other, and encloses it at each step taken—the only method the patient possesses of walking, the feet being too far apart to allow of the knees being brought into a parallel position: the consequence is that the child will be constantly falling down, or tumbling about, and that he suffers additionally in health from the inability to take proper exercise without experiencing pain and great inconvenience. You must be well aware that it requires but little irritation or annoyance, constantly kept up, to interfere with the health of a child. This irregularity of movement keeps up an undue, and oftentimes very considerable motion in the spinal column; and when the affection is confined to one extremity you will occasionally find, as I mentioned to you when speaking of the deformities of the feet, a tendency to lateral curvature, and very frequently the foundation is laid of spinal deformity; as when the ligaments of the spine are thus kept constantly in motion, I mean an increased motion, producing elongation, the spine will yield in any position, which, from whatever cause, may be longer maintained than any other; for it cannot be expected that they can, when thus kept constantly in motion, acquire that degree of solidity and consolidation necessary to hold the spine and muscles in the erect position. Occasionally I have found talipes equino valgus to exist, arising from paralysis of the anterior tibial muscle, from irritation, or disease of the brain or spinal column, resulting, in addition to the previous deformity: this is, of course, a much more serious condition than either of those before mentioned, oftentimes involving the necessity of the patient wearing support for life.

I mentioned to you that it is combined with outward inclination of the opposite

knee; a case of which, in the adult, is now in the charity, and of whom this is the cast. (Figs. 2 & 3.) This also occasions, at times, increased motion in the spinal column. As the body cannot be kept in an erect position, except at the cost of the spinal column—for you observe that in consequence of the angle of the knees conjointly, the pelvis will be, at times, in an oblique position, and if the spinal column maintained itself perpendicularly the whole of the upper portion of the body would be on one side, or hanging over, a position which would render it difficult for the patient to take exercise, or continued exercise; whereas, by the yielding of the spine, an erect position is maintained, although the body presents a series of angles more or less acute, and of course increased deformity. This outward inclination of the knee-joint rarely occurs in this affection, except in combination with curvature of the tibia itself, as may be easily seen if you cover the upper part of the thigh and leave only the leg below the knee uncovered, when the tibia will be found to have deviated more or less from its straight condition. The foot will be, however, with this, somewhat displaced, generally everted, from the articular cavity of the ankle being out of its proper position, the astragalus lying obliquely in the cavity. In this case the whole foot becomes altered in position without any change in the relative position of the bones or ligaments themselves, the astragalus alone being displaced. This applies more especially to young children; as in strong boys, or young men, you will find just the reverse, from the power exercised by the muscles to prevent this alteration in the position of the astragalus.

The foregoing observations apply principally to young children. This deformity arises, then, at any period during the growth of the individual, and after infancy will be found to occur between the ages of ten and eighteen. It comes on gradually and imperceptibly, without any illness or apparent loss of strength; and the first thing that attracts the patient's attention to it is the knees knocking or rubbing the one against the other: as it proceeds, a weakness is experienced in the joint, more especially on the inner side, which seems to be occasioned by the stretching of the internal lateral and crucial ligaments. The feet are then noticed to diverge from each other, and very frequently to turn in, presenting the appearance of slight talipes varus. (Fig. 4.) This position, however, is only present when the patient is walking or standing, and ceases when the legs are not exercised. You will find, upon examination, that there is, however, a greater amount of lateral motion in the ankle-joint than is natural, and that the internal lateral or deltoid ligament is somewhat stretched. You will rarely find talipes valgus between

FIG. 2.

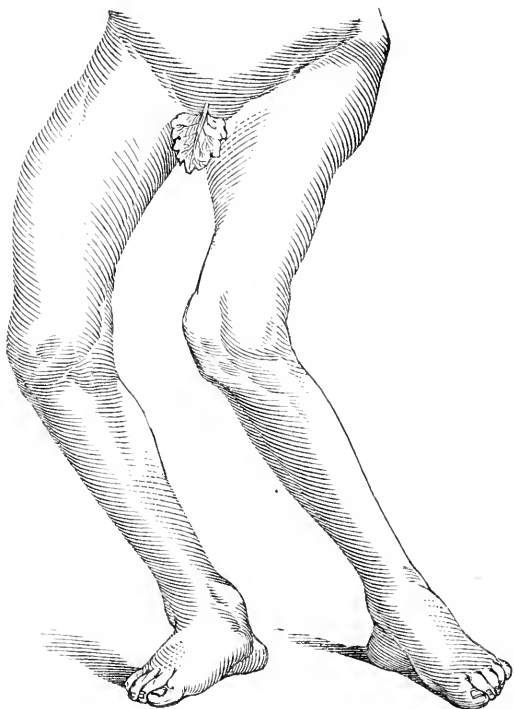


FIG. 3.

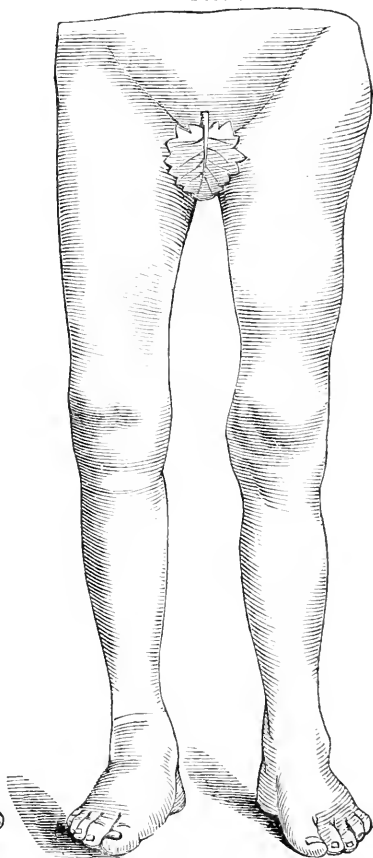


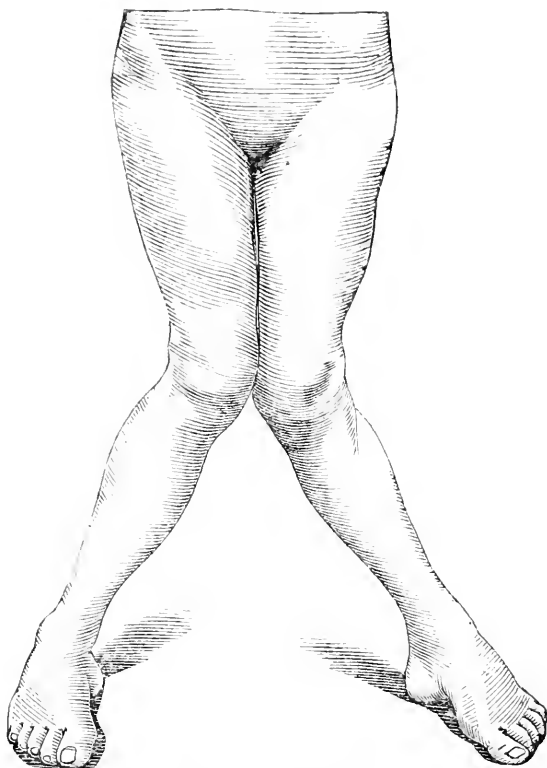
FIG. 2. An illustration of knock-knee of one leg, and outward inclination of the other, taken from a patient aged 18.—FIG. 3. The same after treatment. It must be observed, however, that the outward inclination is only removed during the time the instrument is on, an interspace existing between the internal condyle and head of the tibia, shewing that the deformity in that leg is owing to a curvature in the bones, altering the relative position of the articular surfaces.

the ages of 10 and 18, as a consequence of the deformity, owing, I imagine, to the general health being stronger than in the young subject, and to the greater power and tone of the muscles generally, which, by their action, are enabled to protect the ligaments from so great an amount of pressure, and consequent stretching; whereas in children thus affected very little assistance can be expected from this source, inasmuch as general debility to a much greater extent is constantly present, allowing of the attachments of the bones and joints to yield from the slightest causes.

You will never meet with curvature of the bones combined, unless that curvature has arisen during the earlier period of life, the bones presenting and possessing their natural and normal length, size, and form, but you

will be struck in these cases, more particularly, with the apparent enlargement of the internal condyle of the femur which I mentioned to you, and which is more striking in youth than in childhood, from the general outline being as a matter of course more clearly defined, and also from the gastrocnemius, from the change in the relative position in the bones, leaving as it were, the internal condyle and going direct to its origin: the question then, arises, what is the change that takes place, causing the bones thus to alter their position? The objects who present themselves are generally those whose occupations require them to be for many hours in a standing position, as a compositor for instance, or those who are obliged to carry heavy weights and to undergo much bodily fatigue, combined, perhaps,

FIG. 4.



An illustration of knock-knees, taken from a patient aged 18 years, in which the inversion of the feet, resembling slight talipes varus, is most apparent.

with an insufficient diet—as bakers' or butchers' boys. In these cases, then, it would appear to occur, first, from over exertion; 2dly, from general debility occasioned by that circumstance, and by bad or insufficient diet; in this way the passive agents of attachments of the joints have more to do, and a greater force is exercised constantly upon them, than natural, from the muscles becoming fatigued and unable to continue that uninterrupted action which at all times takes place in perfect health, with an amount of power constantly equal to their labour, but the moment the muscles become over fatigued, the ligaments are then called upon to assist the muscles in supporting the body in the erect position, and from their inability to do this constantly, without yielding and becoming elongated, the knee-joint yields inwardly in proportion to the unusual stretching the ligaments are subjected to, and when once the force is directed obliquely, instead of directly on the articulating surface, the yielding proceeds more or less rapidly with the deformity. When the deformity is considerable (as in this cast), and has been so for

some years, does the articulating surface itself alter in position, or does the internal articular surface of the tibia diminish in size, and allow the internal condyle of the femur to sink? Or does the internal condyle itself alter in, and increase in size and project more than it does in its natural form and size? I do not believe that either of these changes takes place, although in the case mentioned a separation might be felt between the tibia and femur internally, after the legs were brought into a straight line. My opinion is, the articulating extremities are not in fault, certainly not primarily, and the only doubt that exists in my mind is the possibility of the articular surfaces growing in this position, supposing the deformity to have arisen during the early period of childhood. We have had patients at this charity, the most severe cases met with, in whom, after many months' treatment, when the legs have been straightened, and where there was no curvature of the bones, the joints have maintained their position, without support of any kind, and without the joint yielding in the slightest degree—even the case of

which this is cast ; the patient being eighteen years of age, within twelve months he could stand and walk without any artificial support, and without the joint maintaining this position. I have a patient, aged seventeen, at this moment, who was operated upon eighteen months since, and whose joints now are perfectly recovered, and he can maintain their proper position unassisted. In children I have not seen an exception to this. But the case mentioned to you before certainly is an exception to this, as at present it is three years since the operation, and he cannot walk without his supports, so that although I believe no alteration takes place, certainly none by attrition—for I cannot conceive the possibility of the cartilage being reproduced after it has been rubbed down—yet it is a question on which, from our present experience, I am unable to speak positively. I can understand the articular surfaces of the tibia and femur being altered in position from curvature in the shafts of those bones, but this is not a change in the articular surfaces themselves, but in the support or pillars on which they rest : look, for example, at the bones of a congenital talipes varus, a skeleton of which I have seen ; we do not find the bones suffer by friction, or the articular surfaces altered, except in the slightest degree, although the malposition is extreme, and in a joint upon which the whole weight of the body is supported, so that this idea does not appear to me to be founded on fact. But, if the bones are curved, and thus alter the position of their extremities, then I can understand how the articular surfaces become perfectly adapted, and in fact produce this deformity. You will always find contraction or rigidity of the biceps tendon in these cases, and very frequently of the fascia lata and vastus externus, which will be more or less contracted, according to the severity of the deformity, and the length of time it has existed. These patients suffer severely from weakness of the joint, and if the deformity is allowed to proceed, are rendered at last totally unable to follow their occupations, if laborious. When it is confined to one leg, with outward curvature of the other knee, they are very liable to fall from any irregularity in the surface, and when they do so, the sensation conveyed is that of dislocation of the joint, causing the most acute pain, which will occasionally last twenty-four hours, and confine them to their bed or couch. The cast before you is an instance of this kind, and the patient was 27 years of age : I operated upon him three years since : his leg has perfectly recovered itself, and he is enabled to walk without any support. It has a perfectly natural appearance, which, even on his return home, immediately after the operation and treatment, which occupied less than a month, was so conspicuous, that inquiry was made “ if

he had had his leg removed and set straight.” He was a reporter, and originally a weaver, to which occupation he attributed his deformity, together with a spare diet. You will find in some of these cases, as I mentioned to you in younger subjects as incipient, actual lateral curvature ; which appears to come on simultaneously with the deformity in the knees, and to progress in the same ratio. We had a case some time since in the Institution of this kind ; very severe inward inclination of the knee, combined with lateral curvature, and from the patients’ account they appeared to arise simultaneously ; too much attention cannot, therefore, be paid to it in its early stage.

THE STATE OF THE POOR IN SCOTLAND*.

[ALTHOUGH the Report of the Commissioners for inquiring into the administration and practical operation of the Poor-Laws, and the Remarks of Dr. Alison on that report, are not strictly of what may be called a *practical medical* character, still these documents have appeared to us to embrace medical considerations of the very highest kind, and we have thought that a notice of them in these pages would be very much in place. The condition of the poor has important relations with disease, and therefore with the medical profession. Out of their destitution arises disease ; and the future security of the general health depends mainly upon their physical condition. We beg our readers’ best attention to the following excellent summary and comment by Dr. Somerville Scott Alison, whose name is already familiarly and honourably connected with the subject.—ED. GAZ.]

To our professional brethren in this part of the kingdom we are desirous to make known a cause in which the medical profession beyond the Tweed have nobly acquitted themselves ; and while they have done honour to themselves, have done credit to the profession at large. They have, we say it emphatically, been the zealous, the indefatigable, the humane, and the fearless guardians of their poor countrymen. No class of the community has rendered more important services to the poor, giving them gratuitous medical advice, frequently pecuniary aid, visiting their dwellings, and representing to the richer classes their wants and necessities. And this has been done while the appointed guardians of the poor, under Act of Parlia-

* Report from Her Majesty’s Commissioners for Inquiring into the Administration and Practical Operation of the Poor-Laws in Scotland. Folio, pp. 74.

Remarks on the Report of Her Majesty’s Commissioners on the Poor-Laws of Scotland. By William Pulteney Alison, M.D. Edin. 8vo. pp. 302. W. Blackwood & Sons.

ment, have wofully neglected their part, and have, to the injury of their destitute countrymen, permitted the salutary provisions of the law to fall into utter abeyance. The wretched and almost totally unrelieved condition of the poorer classes of Scotland had been pressing upon the minds of those who came most in contact with them, particularly medical men and some zealous clergymen. When Dr. Alison, of Edinburgh, whose reputation is in all the schools of medicine throughout the civilized world, and whose name for years has been associated in Edinburgh with every cause of charity and humanity, demanded the public attention, in 1839, to the subject, by a work entitled, "The Management of the Poor in Scotland." In this work Dr. Alison maintained that the poor are most inadequately relieved, that there is a vast amount of wretchedness and misery throughout Scotland, almost totally unmitigated, such as in other civilized countries has no existence.

The Sanitary Report of Mr. Chadwick, subsequently published, gave ample testimony of the destitute condition of the poor of Scotland. The facts given in these works took the English public by surprise; they had long been under the pleasing hallucination that Scotland was not merely a land of cakes and whiskey, but one of general contentment, comfort, and happiness, and above all, of boasted independence. It was a land which the world believed to be peculiarly blessed, in which there were few poor, and consequently little necessity for a legal provision. The curtain was lifted, the veil was torn aside, and destitution, grave, terrible, and pressing, was revealed—a destitution pressing down thousands to the dust, cheerless and hopeless. There were seen octogenarians, male and female, struggling to subsist upon a few pence a week; there were orphan children, neglected, boarded for the sake of cheapness with the worst and most infamous of characters; many left entirely to themselves, without even the semblance of help. Was this happy Scotland? Was this the land in which the labouring man was comfortable, too independent to accept of parochial assistance? Was this, finally, the land of religion, with its matchless clergy, the world exclaimed, with wonder and incredulity?

It was felt that the credit of Scotland's *better or richer* classes was involved; efforts were made to impugn the statements, and to throw discredit on the witnesses. Many of the lawyers, and not a few of the clergy—we say it to their shame—thus endeavoured to stifle the voice of humanity, and, having long deprived the poor of their rights, desired still longer to withhold from them that relief to which they were entitled both by act of Parliament, by religion, and common charity.

We ourselves had the gratification to afford a report to the Poor-Law Commissioners, in 1840, which we believe has proved to be useful. We told the truth as it was known to us, and, in our simplicity, dreamt not that the statement of truth could create angry feelings, though it might be unpalatable to some. In so good a cause we feared no evil: but we were soon disabused of our error. A letter arrived from a gentleman filling the office of a parish clergyman, accusing us of malice towards him, containing much personal abuse, because, he said, the destitution of the poor had been exaggerated. As proof of malice, he cited the size of a parish, as given by ourselves, which, he said, was more than double its actual extent. However, we were able to meet this proof of malice; for we assured him, which was the case, that the extent of the parish was taken from a statement in the Statistical Account of Scotland, to which his own name was attached. But as we go along we shall have abundance of the same sort of conduct. Let us, in the first place, take a cursory glance at the Act of Parliament which should have guided the managers of the poor, in order that it may be understood what were their powers, and their duties, and what are their merits. The Act in question was passed by "The Sixth Parliament halden and begun at Edinburgh, the zeir of God 1579 zeirs, be James the Sext, be the grace of God, King of Scottes, and three Estates of this Realme." In this Act there are stringent provisions against begging by all persons between 14 and 70 years of age. Thus any between these ages apprehended begging, "shall be put in the King's waired, or irones, sa lang as have any gudes of their awin to live on. And fra they have not quhairupon to live of their awin, that they be nayled to the Trone, or to other tree, and their eares cutted off, and banished the cuntries; and gif thereafter they be found again, that they be hanged." But besides containing barbarous provisions against begging, the Act specifies that "sic as necessarlie mon be susteined be almes," be duly provided for.

Great exertions were made by the landlords of Scotland, and the clergy, to prevent a Government inquiry into the condition of the poor of Scotland: it was gravely asserted that the people were exceedingly comfortable; that to give the poor a legal claim to assistance, such as exists in England, would destroy the character of the nation, remove the much-vaunted characteristic of Scotland, the independent spirit. One clergyman had the presumption or folly to assert, in a printed report, that the Scottish administration of the poor-law had attained as near as possible to a state of perfection. Notwithstanding these interested and ungenerous efforts, her Majesty's ministers di-

rected their serious attention to the subject; and in January of last year her Majesty constituted a Commission, for the purpose of inquiring on the spot into the condition of the poor, and the operation of the poor-law. The Commissioners appointed were—Lord Viscount Melville, Lord Belhaven, Henry Home Drummond, Esq., James Campbell, Esq. of Craigie, Edward Twisleton, Esq., the Rev. Patrick Macfarlan, and the Rev. James Robertson. Of these seven noblemen and gentlemen, six were Scotchmen, and one, viz. Mr. Twisleton, an Englishman.

The Commissioners commenced taking evidence in March 1843, and concluded this part of their labours in February of the present year. They began at Edinburgh, and subsequently visited different parts of the country. They had the power of summoning witnesses, and of putting them upon oath. Their mode of proceeding was to examine either the minister or session-clerk of every parish, and other persons suggested to them as likely to furnish information. The Commission also personally visited the houses of many paupers in the different districts. The Report may be divided into two parts: the 1st, containing an exposition of the administration of the law; and the 2d, in which remedial measures are considered.

We propose to give a condensed account of the present administration, as displayed in the Report, and in the evidence appended.

Persons relieved.—The persons entitled to relief under the Acts of Parliament are those who are either wholly or partially disabled, on account of age or infirmity, so as to be incapable of working and earning for themselves a sufficient maintenance,—crooked folk; sick folk; impotent folk, and weak folk; aged, pure, and decayed persons. “We find accordingly,” say the Commissioners, “that those who are broken down or disabled by old age—those who are afflicted with any disease of a permanent nature, which incapacitates them from work—those who are insane or fatuous—and children, on account of their tender years, whether they be orphans, foundlings, or deserted by their parents, or deprived of support from their father by his death, transportation, or imprisonment, are all considered proper objects of relief.” We shall presently see how far those who are thus considered proper objects of relief, are provided for.

Distributors of relief.—The distributors of relief vary according as the parish is burghal or rural. In the burghal parishes, the duty of providing funds, and of administering relief, falls upon the magistrates. In the rural parishes the duty falls upon the kirk session, and the heritors or landowners of the parish. The kirk session is an eccle-

siastical court, composed of the ministers and elders of the parish. This court should exist in every parish, but where the minister has no elders then he is supposed to represent that court, and exercise in his own person the privileges of the body. The minister is ex-officio chairman, and the elders are chosen elders by the minister. It will thus appear that the minister must be possessed of great power in this court. The heritors are members of the court. The votes of all are alike. The body, composed of kirk session and heritors, meet half-yearly, have complete control over the affairs of the poor, and may, if they deem it right, assess the parish to any amount for the support of the poor.

Funds for relief.—The primary source from which the poor are relieved is the collections made at the church doors on Sundays. In poor parishes, or where the parish church is ill attended, the collections are small. In some parishes, the heritors pay what is termed a voluntary assessment, in order to supplement the inadequate church collections. This is entirely voluntary. They do this rather than levy a regular assessment, which would be virtually binding in time to come, and because there is professed to be a great fear of breaking down the national character, by giving relief that is not entirely voluntary. In a few parishes in Scotland, chiefly in Berwickshire, the managers of the poor have levied a legal assessment, and availed themselves of the powers put into their hands for the benefit of the poor, by Act of Parliament.

Relief.—In some of the larger towns, poor-houses are found. In Edinburgh, there are three; one in Glasgow; one in Ayr; two small poor-houses in Aberdeen, one in Lanark, one in Forfar, one in Dunfermline. In several other places there are small houses for the reception of decayed persons. “The Scottish system,” say the Commissioners, is “essentially one of outdoor relief. There are various ways in which this relief is given; the most common mode is to give an allowance in money by the week, fortnight, month, quarter, or half-year. In the northern and western Highlands, generally the relief given from the poor funds is so small, that it can scarcely be taken into account, and is not represented as a material assistance, far less as a sufficient provision for the maintenance of the poor. In the county of Sutherland, we were told that it was considered ‘as an acknowledgment of poverty,’ that is, as a sort of recognition of the claim of the party receiving it, to obtain charitable aid in whatever other way he can, from the benevolent individuals in the neighbourhood. We accordingly find that in those districts the annual allowances are sometimes as low as 2s.,

and seldom exceed 10s." There is great diversity in the amount of relief given, even in those districts where it is intended as a substantial assistance to the poor.

Helpless paupers, who either from mental or bodily incapacity are unable to take care of themselves, are usually boarded with relations or friends, or strangers. Orphans, foundlings, or deserted children, are provided for in this way, and the Commissioners add, "and we may here state, that children dependent upon parochial aid are, generally speaking, well taken care of; the parties with whom they are boarded being, for the most part, persons of respectable character." It would doubtless have been better had the Commissioners directed attention to the notorious fact that many of the children dependent on, or rather receiving a pittance from, the parish, are shamefully neglected, that they are placed with persons of bad character, and that they are thrown into the veriest nurseries of crime. But we shall see by the very evidence which they produce how this important matter stands. Lunatic and fatuous persons are provided for, either by sending them to a lunatic asylum, or by boarding them in private houses; the latter, being the cheaper method, is generally adopted. Why not say at once that many are sent to the Isle of Arran, and that many are kept as no thief would keep his dog? "Quartering," the Report says, "is a mode of relief adopted in some districts in Scotland. A fit object for parochial relief is disposed of by assigning to him a particular district of the parish. It is considered obligatory on the inhabitants of that district, in rotation, to provide him with board and lodgings for a certain number of nights, in proportion to their means." There is something so remarkable in this system of quartering, so becoming in a civilized country, and so completely proving as it does how independent is the spirit of the Scottish poor, and how consistently solicitous the higher classes of Scotland, the unmitigated friends of the present mode of administration, that we are tempted to give a little of the evidence on the subject. The Rev. John Rannie, session clerk of Walls, says, "Our parish is divided for this purpose (quartering) into twelve districts. One pauper is allotted to each district, and he or she goes about from house to house, and lodges with the one or the other, as occasion requires, or he or she feels inclined. If they go round regularly, they will sleep once a fortnight in each house." The Rev. William Stevenson, of North Maveon, says, "The paupers I now refer to are boarded and lodged by the tenants; they are rather sheltered; for they have blankets of their own, which have been given them by the Kirk Session, and which they carry with them along with their bed, as

they move from house to house." Verily this is a mode of relief calculated to beget habits of regularity and of dependence upon self. Dr. Chalmers will, perhaps, see no degradation here, no risk lest the pauper be reduced to the alleged degraded condition of the English labourer. Licensed begging, we are further informed in the same Report, is another mode of relief in Scotland. The Act of 1672 directs, that if the contributions at the Parish Church are not sufficient "to entertain such persons as through age or infirmity are not able to work, they are to receive a badge or ticket, to ask alms at the dwelling-houses of the inhabitants of their own paroch only." "We find, accordingly," add the Commissioners, "that begging is, in many places, a recognised means of subsistence for paupers. In the parish of Cambelton 49 persons were in October 1842 struck off the roll, and badges were given to such of them as chose to receive them, as a license to beg."

Can this be the same system which the clergy and their patrons, the heritors, tell us is so well calculated to sustain the virtue of Scottish independence, and which is the nearest possible approximation to perfection? Truly these good gentlemen would deprive us of the use of our faculties as readily as they have deprived the poor of the means of subsistence to which they were entitled.

Occasional relief.—Allowances are sometimes made in cases of sickness or of death. These are chiefly—1st, sums paid on account of the poor when sick, in which, of course, is comprised medical relief; 2d, funeral expenses; 3d, expenses incurred by passes and removals.

Medical relief.—We have the authority of the Report, that "there is scarcely any provision for medical relief to the poor, out of the poor funds in Scotland." This seems to be left systematically to private charity. In some places, however, such relief is provided. In Glasgow there are 17 district surgeons, to each of whom twenty guineas are annually paid. In Greenock there are three district surgeons, to whom the same allowance is given.

Remedial measures.—We naturally expected that a large measure of improvement in the laws would be proposed, knowing from personal experience how great was the occasion for it. We shall in the first place consider what measures are proposed, and then offer a few comments upon them. The commissioners state that: "The points upon which we feel it necessary to animadvert, do not arise so much from defects in the laws, which provide for the relief of the poor, as from their being in many parishes inoperative, or administered in a very insufficient manner. Our object, therefore, has been to consider in what way the present law may be

made to work most efficiently, without making any very material changes either in its letter or its spirit." Why this tender dealing? Verily the law as practised has little to recommend it to favourable consideration.

Inadequacy of relief.—The commissioners are of opinion, "That the funds raised for their relief is, in many parishes throughout Scotland, insufficient." They state, that in many of these places (parishes where the only funds for the support of the poor are the church collections), it will be seen that the quantum of relief is not measured by the necessities of the pauper, but by the sum which the Kirk Session may happen to have in hand for distribution. But let us look at the evidence itself. The Rev. Dr. Gordon, Edinburgh, says, "I would say, that in general, the allowance to out-door pensioners by the charity workhouse is not sufficient to keep them in existence at the lowest possible rate of living. The Rev. J. Hunter, Edinburgh, is asked, "Could the poor of your parish possibly subsist on their allowance from the charity workhouse, without other resources?" "Certainly not." "Are you aware of the resources on which they rely?" "Public begging; and I fear that leads to lying, and stealing, and imposition on the public." "Some of them are almost absolutely famished." The Rev. J. Guthrie, Edinburgh. "Do you think the present allowances not enough?" "I think them universally deficient. In many cases, people have no choice but to steal or starve." "Do you think those small allowances tend to promote a sense of independence among the people?" "I think the very reverse."

Jos. Marshall, Esq. Leith. "In scarcely any case does a poor person receive more than a shilling a week, though utterly unable to do any thing."

Capt. Miller, Superintendent of Police, Glasgow. "The allowance is scarcely sufficient, in most instances, to pay the rent of their miserable dwellings."

Mr. D. Stowe, Glasgow. "The poor receive more from their poor neighbours than they do, or ever can, from any public charity."

Mr. Steele, Greenock. "The poor get their support more from begging than from the assessment."

Mr. J. Black, Greenock. "A resolution was come to lately, that an additional sum should be assessed for the loss which the poor would sustain, from the labouring people not being able to assist them."

Capt. Grove, Superintendent of County Police, Perth. "The poor here are a most miserable people—worse than in Ireland, where I was quartered a considerable time."

Rev. J. Menlans, Tullialan. "The number of the poor has been increasing. A

great proportion of the property of the parish pays nothing to the support of the poor at present." Witness considers, that there would be some risk to life and property, if some addition were not made to the present inadequate allowances. He has seen some cases approaching to starvation."

The commissioners, although impressed with the opinion that the allowances are inadequate, state, "That it is not desirable that there should be any appeal from the decision of the parochial managers as to the amount of allowances." They even desire to abolish the appeal to the court of session which at present exists.

The commissioners are so little instructed by experience as to fancy that due attention on the part of the managers of the poor, to the wants of this class, will be best obtained "by the influence of reason and good feeling, aided by public opinion." Are we, then, to have a new stock of reason and good feeling showered down upon the managers? Are these gentlemen all at once to become penetrated with an awe of public opinion? Have we any guarantee that the public feeling will be more operative a few years hence, than it was a few years ago?

The managers of the poor must be controlled by power more influential than reason, or good feeling, or even public opinion. Will these men, no doubt individually good men, regard such influences, having so disregarded them before? Assuredly not: they who have disregarded Acts of Parliament which they were bound to stretch to their utmost limit in so good a cause, will disregard such stimuli. We protest, in the name of an injured people, against this irreparable power. The proposed improvement, we hesitate not to aver, will end in nothing if uncontrolled power continue in the hands of interested men, and in the tools of interested men. Dr. Alison says, at p. 134, "We must always remember that all the neglect of the poor, and all the evils consequent on that neglect, which have been described, have taken place under the administration of those authorities—clergymen, elders, and appointed managers of the poor; men whose individual character is irreproachable, and who have been hitherto invested with nearly irresponsible power in this matter. It has been represented to the public even lately, since these inquiries began, that 'the interests of the poor cannot be in better hands.' I can have no wish to hurt the feelings of any of these persons by the exposure of the evils which have resulted, and still result, from their system of management; but in looking forward to the remedy which is allowed to be requisite, it is impossible to avoid drawing the inference from these facts, that if the above had been a fair description of

their conduct in most parts of the country, such evils could never have existed. What security can we have that, under the same management, the same consequences will not recur? It is impossible to shut our eyes to the fact, that, under such management in times past, the law has been so much perverted and altered from its original intention (always in favour of the interests of the rate-payers and against the poor) as to justify the observation which has been repeatedly made, on comparison of the original statistics of England and Scotland, that the difference between the two countries in regard to the aged and infirm is simply this, that the law is obeyed in the one, and disobeyed in the other."

Dr. Alison continues to say, on this most important point, "It must be remembered, also, that many of these administrators of the law have been so far from admitting, even to this day, any defect in the system in Scotland, that they formed themselves, only three years ago, into an association 'for opposing any official inquiry into the management of the poor in Scotland,' alleging that it was unreasonable and absurd to 'tamper with the Scottish poor-laws,' which were known by experience to work so well, and to produce the happiest effects on society."

We hold it to be the duty of the legislature to incite the managers of the poor to the full and fair discharge of their duties by imposing upon them the most ample responsibility. The managers should lay to their hearts the valuable remark of Mr. Chadwick:—"Every man ought, in fact, to distrust his own judgment and his own actions in the affairs of others in proportion as his interests and affections are concerned."

The Commissioners propose, that a Board of Supervision, all the members of which should be unpaid, shall be established, to which reports shall be made, at least twice in the year, from the parochial boards. They propose that the board have no title to regulate the proceedings of the Poor-Law managers, but have "the fullest power of inquiry and remonstrance." The establishment of such a board, with power to regulate the allowances of the poor, and to decide on the claims of applicants, can be of very little use for reasons sufficiently known, but on which we cannot enter.

Poor-houses.—We are glad to find that the Commissioners are sensible of the evils of boarding helpless persons and tender orphans in the houses of private persons, and that they recommend, "That, if requisite, power should be given to two or more contiguous parishes to unite for the purpose of erecting a poor-house." The following evidence will show the necessity which exists

for the erection of poor-houses. A boarding-house for paupers and children belonging to the barony parish of Glasgow:—"Two rooms, about 14 feet square each, and a third room of about the same proportions. Admitted that they sometimes have eighteen children in two rooms—eight in one, and ten in the other." Another boarding-house:—"Fourteen women and children in the house. Most of the women fatuous and very old." Another boarding-house:—"Several inmates, male and female. Maniac naked by the fire." A fourth boarding-house:—"Several idiots. One room for males, with three female idiots in it. Very much crowded."

Medical relief.—The Commissioners state that medical relief is often very scantily supplied to the poor. "They, as we have already mentioned, are often dependent on the charity of medical men both for medicine and attendance." They think it desirable "that the managers of the poor in each parish should have full discretionary power by law to afford medical relief in all cases where it may seem to them desirable." "We would further recommend, that in those parishes where it is found expedient to build poor-houses, the managers of the poor should, in connexion with the poor-houses, provide accommodation for dispensaries for the poor." On the subject of medical relief Dr. Alison says:—"I believe it to be generally deficient; where it is sufficient for them (the poor) it is a heavy and unjust burden on the medical men, who devote often, I believe, a larger portion of their time and money to the service of the poor than any other class of the community. In most towns there are dispensaries, by which medical men are relieved of great part of the expense of medicines for the sick poor; and in some of them, I believe, the duty of visiting the sick poor is very carefully performed; but being always on the voluntary principle, there is no security for its being regularly or uniformly performed." Andrew Robertson, Esq. surgeon in Gervan.—"Has practised seven years; his father has practised there fifty years, and he has a brother also a surgeon; and most of the sick poor apply to them. "Except in one or two cases, neither he nor his father ever received any remuneration from the Session, or from any other quarter, for attending the poor." William Gibson, Esq. surgeon, Dalry.—"I have practised in Dalry twenty-eight years, and have had very many opportunities of visiting the paupers. The sum which I have received from the Session, or from the Poor Committee, has not exceeded one shilling a-year. I have frequently had a difficulty in treating poor patients properly from not being able to supply them with nutritious diet. I just pay for the medicines

myself." Thomas M'Millan, Esq. surgeon, Wigton.—"Has attended the poor in seven parishes, and never got a farthing from the Kirk Sessions of any of them." The Rev. C. M'Kenzie, Ross-Shire.—"What becomes of able-bodied men who fall sick in your parish? "They are left in the hands of Providence." Much more evidence might be quoted to prove how necessary it is that medical assistance should be more adequately provided for the poor, but we greatly fear that the provisions recommended by the Commissioners will prove in a great measure inoperative. It is highly desirable that medical officers should be appointed to attend the poor throughout the whole country, with fixed salaries. We are convinced, from an intimate knowledge of Scottish parochial machinery, that until this is effected the poor at large will never be properly attended to. How useful would such a staff of well-educated and industrious practitioners prove.

In our report on the sanatory condition of East Lothian, furnished to the Poor-Law Commissioners of England in 1840, we recommended the establishment of paid parochial surgeons, and all our subsequent experience has attested the propriety of the recommendation. A body of parochial surgeons would be inestimable in relieving the medical wants of the poor, in suggesting to the lower classes the means of preserving health, and in many other obvious ways. The doors of such officers would be always open to the poor, who would not, as at present in thousands of instances, permit disease to gain a long march unchecked upon the constitution, ere relief is obtained. Modesty frequently prevents a timely application to the surgeon, and the patient delays to solicit attendance for which he knows he can offer no return, and for which no return will be made by any party whatever. Many valuable lives are in this way lost. We know this from personal experience, and the evidence of many medical men in the report of the Commissioners is to the same effect. Were medical men regularly paid for their labour to the poor, they would perform the duty with more regularity and efficiency. We trust we may not be misunderstood here: we mean no reflection on our professional brethren, whose rare devotion to the cause of neglected misery we shall ever commend; but we know that they are men, and, as such, liable to be affected by causes influencing other men. We hold it to be no sufficient argument against paying medical men in Scotland for services to the poor, that they have been found willing heretofore to act without remuneration. The question is, are their services required? Are there, or can there be provided, no funds from which

payment can be made? The services are urgently required, and funds may and can be raised for the purpose of paying for them. Again, the question might be put, does the medical man require payment? Doubtless he does. Neither in town nor country is he so over well paid in Scotland; and we know that many well-educated men throughout the rural districts, notwithstanding a life of unceasing toil, possess scarcely the wherewithal to maintain the status of gentlemen, or to purchase the necessary stock of books and instruments to maintain themselves in a state of efficiency. Doubtless the practitioner can afford to lose a sum of money as little as the heritor is unable to pay it. The parish surgeons might prove of immense advantage to the higher classes also. As appointed guardians of health, it would be their duty to investigate into the circumstances giving rise to an unusual amount of sickness or mortality. They would recommend the necessary measures for the abatement of disease, and for the prevention of its propagation amongst other classes of the community. When necessary, they would communicate with the proposed Council of Health on important points of public health. A vast body of valuable and accurate information might be obtained from these officers on the subjects of health and disease, available to the purposes of medical science and national legislation. The Commissioners, however, we regret to find are not of this opinion, and simply "think it desirable that the managers of the poor in each parish should have full discretionary power by law to afford medical relief in all cases where it may seem to them desirable." The mode in which the managers have exercised their powers is so unequivocal that we are inclined to put little trust in the exercise of discretionary power on their part for the future.

Having found that the most destitute and helpless poor required little or no help, it would be too sanguine in us to expect them to think more was required for the medical practitioner. Dr. Alison says "that much material advantage may be derived from such arrangements (the appointment of district medical officers paid by the managers of the poor), and much destitution and misery, and ultimate expense be prevented, I think cannot be doubted; but I think it equally certain that the nation can have no security for such advantages as long as the case of the sick poor is entrusted to the voluntary system of charity."

In connection with the subject of paid district medical officers for attending to the poor, we would urge the propriety of appointing officers of health. Our space does not permit of our dwelling on this point, but we beg to refer the reader to the Sani-

tory Report of Mr. Chadwick, where the subject is ably treated, and where much valuable information is collected. Another object much to be desiderated is a proper registration of deaths.

Insane paupers.—The Report informs us that “great improvement has taken place in the treatment of insanity in Scotland within the last twenty or thirty years. Most of the large towns are provided with asylums for the reception of the insane. These houses are in good order, and under excellent superintendence. But,” the Report continues, “although much has been done to ameliorate the condition of those whom Providence has laid under so heavy a dispensation, there still remains much to be done. In some of the parishes which we visited we found cases of pauper lunatics under most improper treatment.” Then follows an account of several insane persons. “Neil Gilchrist, maniac, in a dark closet, a damp earthen floor, with one blanket for his bed. No clothing but a blanket over him. Chained to the wall by a chain round his ankle.” His father has £2. 10s. from the parish for house-rent for the family. “John Livingston, a violent maniac, lying upon straw on a wooden floor, in a loft above his brother-in-law’s smithy: has no clothing on him whatever.” “Alexander Anderson, fatuous, and sometimes very violent Allowance 2s. 6d. a-week. Confined in a bed, which is boarded up so that he cannot get out. He has been kept in this way for nearly six years.” The Commissioners add, “We found a practice prevalent, particularly in the west of Scotland, of sending insane paupers to the island of Arran, and boarding them with small farmers or crofters.” At their request, Dr. Hutchinson, of the Royal Lunatic Asylum, Glasgow, proceeded to Arran, and examined into the condition of the insane paupers. The following extracts are taken from Dr. Hutchinson’s report on the subject. “Duncan Cook has two patients, a male and a female. The male patient was sent by the Barony Parish. He sleeps under the roof, on the turf covering the apartment below. He has no bedding, but some bed-clothes. The female patient has been here twelve months. She complained loudly of her treatment, which was confirmed by others. She had run away, and had been subjected to worse treatment since. I learned from several sources that a Miss M’Nab, a very old woman, formerly in good circumstances, who had been reduced to poverty, and had become insane, had been sent to Duncan Cook. In consequence of ill-usage, she ran away. She was brought back, shaken, and beaten with a stick, and shortly afterwards died. Archibald Murchie has at least eleven patients. The exact number we could not

ascertain, as every effort was made to mislead and conceal; the most distressing reports were prevalent as to his striking, kicking, and starving them. Neil M’Kenzie has two patients; in his house a man died of cold and starvation. He had no clothes, was kept in an outhouse in winter, and had a scanty supply of refuse victuals. John Campbell, about seventeen years of age, is paralytic; he has been subjected to the most cruel usage, beaten with ropes and sticks, both by M’Kinnon and his wife. Mrs. M’Kinnon attempted to deny this, but on being confronted by a neighbour who had frequently witnessed the ill usage, she could not deny it. When we were out of hearing she said she did not care a damn for what we had said; we would soon be away, and then she would work him,” [maltreat him.—S. A.] Dr. Hutchinson says, “The paupers are wretchedly fed, their diet being generally the refuse of the potatoe crop, and butter-milk; ill clad, miserably lodged, and subjected to neglect and ill usage. The patients who are confined are detained in direct violation of three Acts of Parliament. They have been sent to the island without medical certificates, and without the warrant of the Sheriffs of the county; consequently all the persons concerned in sending or harbouring them are liable to the penalty of £200, or three months imprisonment, for each offence.”

After perusing this evidence, there need no longer be any wonder expressed that the managers of the poor opposed themselves to an official inquiry, and expressed their horror of *tampering with “the Scottish Poor Laws, which were known by experience to work so well, and produce the happiest effects on society.”* Does not every right-minded Scotchman feel indignant that his poor and helpless countrymen have been thus brutally ill used? Is he not indignant that the national character has been thus foully blemished by the infamous neglect of the poor on the part of their so-called Managers? Let Scotland, would she right herself in the estimation of all humane men, insist upon better management for the future.

Able-bodied Poor.—While the right of the impotent and aged is recognised in the Scottish law, the title of the able-bodied poor to relief is not distinctly admitted, and the Commissioners state that the parochial boards are not authorised to assess on their behalf. Nevertheless, in some cases of acute illness, particularly fever, a little relief is afforded. The Commissioners are opposed to any legal provision whatever to the able-bodied men, even in times of great mercantile depression. They express their opinion “that if a paternal government give all competent facilities to the operative classes

for the more diversified extension of their industrious capabilities, and for a fuller development of self-dependence grounded on habits of reflection, it will have done all that, in an economical point of view, is, in the nature of things, likely to promote their welfare. The latter objects accomplished, we entertain an unhesitating persuasion that under emergencies of distress, as well as in ordinary times, the provisions of the existing Poor-law, supplemented, when required, by voluntary contributions, as they have heretofore been, will be found, on the one hand, amply sufficient to protect the labouring population, whether in town or country, from extreme destitution; and on the other, conducive in the very highest degree to the steady advancement of their best interests." They therefore strongly advise that the law with reference to this point shall remain unchanged. The chief ground on which this recommendation is made, is this, that the welfare of the labouring population will be best promoted by the present state of the law. Now, if it can be proved that the welfare of this class of the community can be better advanced by another mode of relief of a practical nature, and such as has been found to work well elsewhere, the recommendation of the Commissioners should not be adopted. Dr. Alison contends that the system has no advantages whatever, and that where, as in England, the opposite system is adopted, there is not only a more comfortable condition of the labouring and pauper population, but a more healthy social condition. He completely, in our opinion, demolishes the position of the Commissioners with the very evidence which they themselves have produced, and has proved to our complete satisfaction that the poor family deprived of employment are as much an object of charity as the infirm or aged, and that a legal provision is as necessary in the one case as in the other. The want of employment which overwhelms the working class in times of depression, from decrease of demand, from the bankruptcy of employers, and other causes, as completely takes from him the means of subsistence, as if for the time he were deprived of his limbs. The evil is often as unforeseen as the tempest which overtakes the mariner; it is as much an unavoidable evil as the afflictions of disease. In justice, surely the claims of the unfortunate family for legal relief are good. Has not the community had their services while they required them? Have they not, as long as they have had an opportunity, exerted themselves in their calling? Is it to be granted that they are to be allowed to starve, which experience has shewn is equivalent to support by voluntary assistance, and to fare infinitely worse than our horse, or our ass, which, when they are no longer wanted for a

season, are put out into the green pastures? Did our space permit, we would gladly quote the evidence of the Commissioners to prove how demoralising the influence of unrelieved poverty is amongst the able-bodied, how it leads to vice, prostitution, neglect of education, and the perpetration of crime itself. The evidence of clergymen, medical men, superintendents of workhouses, and governors of prisons, all lead to this conclusion.

We will here add our own testimony as to the condition of the English labouring man. It has been customary in Scotland to speak of the English labourer as a degraded being, void of spirit, and unusually free of feelings of independence thought to be peculiarly Scottish. As far as our observation has gone, the English labourer and working man is not a degraded person. We have found him possessed of proper self respect, having a sense of comfort, willing that his neighbour should be happy as himself, civil, respectful, not obsequious, thankful, gratefully so, for services. While he would rather avoid the parish authorities, he will in times of distress, in sickness, or during non-employment, make his claim in a modest, and yet manly way. He will do this rather than permit his helpless children to starve: he has the right feeling and the courage to lay aside his pride in order to serve his famishing wife and children. We know of many respectable men at this hour who have received most timely and most important aid from the parochial authorities, and who are just as independent as we could well wish to see any of our northern countrymen.

Mendicity.—"We cannot," say the Commissioners, "close our Report without remarking on the prevalence of mendicity. The evil is most observable in towns. In many of the country districts we have reason to believe that it has been checked to a considerable extent by the establishment of rural police. The law relating to vagrants is not clearly defined." They add, "and it (begging) will never be altogether abandoned until people are induced to refrain from indiscriminate charity."

Few things have appeared to us in the management of the poor of Scotland more unreasonable and cruel than the practice of putting down mendicity by the rural police. While a mere shadow of relief is afforded to the poor, it is most unjust and inhuman to take from these wretched persons the opportunity of obtaining that relief which charitable neighbours are willing to grant. When adequate relief is given, so as to prove a real and substantial subsistence, then it might be practicable and proper to suppress vagrancy; till then it is inhuman cruelty. We are at a loss to conceive how English blood, though in the veins of a poor man, even of an unrelieved poor man, does not boil

with indignation, and incite to acts of resistance and outrage, when in his person the liberty of the subject is thus invaded. We know it, that the poor of Scotland are the victims of a brutal un-English tyranny. The rural police, whose services have been noticed by the Commissioners with obvious approbation, exercise a fierce despotism against those helpless beings. We remember well with what unfeeling pleasantry one of the rural police informed us that he had at last detected "the fellow begging; that he would never try it here again, for he had had him in the 'lock up' all night, without fire or food, and had carried him in the morning to the boundary of the parish." It cannot be denied that many of the unrelieved poor are actually hunted from parish to parish in the most cruel manner: even sick persons are moved about in this way, and the evidence gives a case in which one person actually died during her forced peregrinations. The superintendent of police in Roxburghshire unconsciously testifies against the cruel usage of the poor. "Witness has gone round to the farm houses, and got the masters to agree neither to serve nor to harbour vagrants; but then their wives scout him, and tell him that they are in the will of God Almighty,—and that as long as they have a handful of meal or a pickle of straw, they will not turn the beggars from the door."

It cannot be the object of the managers of the poor in Scotland to destroy every good trait amongst their countrymen. They will neither give nor let give, yet they assure us the great object they have in view is to elevate the character of the people. Not satisfied with rendering the poor, miserable beggars, miscreants, and criminals, would they destroy the very virtue of charity, even amongst women—a virtue which their theories make it a point to foster. It is gladdening to observe, despite the efforts of police, that Scotch women will still be charitable, and share with women in the savage state that heaven-born trait so well described by the poet of the poor—

"Man may the sterner virtues know,
Determined justice, truth severe:
But female hearts with pity glow,
And woman holds affliction dear."

We would venture to add—

"Be't woman's sacred part, to fill,
With hope, the fainting beggar's breast;
The 'pickle straw, the handful meal,'
To give him—hunted and oppress."

Mr. Chadwick speaks to the point. He says:—"To refuse relief, and, at the same time, to punish mendicity when it cannot be proved that the offender could have obtained subsistence by labour, is repugnant to the common sentiments of mankind."

To sum up—doubtless the Commissioners

have had a difficult task imposed them. Yet they had a noble opportunity to have befriended the poor of Scotland. We regret we cannot say that they have fully availed themselves of it. Doubtless with the best intentions in the world, these honourable men, for whom we have the highest regard, have failed in their purposed remedies. They have gone only part of the way; even their recommendations, as far as they go, will to a great extent prove ineffective, if not enforced by the usual terrors of the law. In the meantime we thank them for their services in the cause of humanity. We know the difficulties they have had to contend with,—a body of heritors and of clergy devoted to the present system. We trust that the wisdom of parliament will meet the wants of the Scottish nation. It is but justice to one of the Commissioners, Mr. Twisleton, an English gentleman intimately acquainted with the administration of the Poor Law in England, to say that he dissented from the report much on the grounds which have been advanced against it by Dr. Alison and ourselves. We feel deeply indebted to Mr. Twisleton. He is not the first Englishman who has befriended Scotland, and we trust that his example will be followed by many of his countrymen in the British Houses of Parliament, and that by their means the hands of Scotland's friends may be strengthened and enabled to do justice to the poor.

Of Dr. Alison's work it is scarcely necessary for us to say a word in praise. It is almost enough, in order that it be prized, that it be known as his. We earnestly recommend a perusal of it by all friends of Scotland, by all friends of humanity. It is the fearless and able advocacy of the cause of the poor, by a man who has for them, a heart to prompt, a head to guide, and a hand to give.

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THEORY OF RESPIRATION.

By GEORGE KEMP, M.D. Cantab.

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(For the Medical Gazette.)

THE object of the following paper is to connect the principal facts of the phenomena of respiration, as elicited by trustworthy observers, and to offer a new and independent mode of accounting for the results of that process.

It is taken for granted, as an axiom never to be infringed, "that experiments so constituted as to ensure the

greatest practical simplicity in their conditions, and at the same time to establish general principles, cannot be set aside, or even invalidated, by such as involve numerous stages, each one of which is exposed to known sources of error, and which, after all, are only calculated to prove a particular case."

Considerable difficulty has arisen from the very discrepant results obtained by Lavoisier and Séguin, as compared with those of Menzies, Davy, Allen, and Pepys; and the cause of this difficulty seems principally to have originated in the pre-conception, that the function of the lungs is carried on with uniform intensity. Dr. Prout did much to reconcile the statements of previous philosophers, by showing, that the quantity of carbonic acid given off, and consequently, of carbon oxydised, appreciably differs at different periods of the twenty-four hours; and, in a most valuable summary of recent researches published in the *Chemical Gazette*, No. 38, p. 154, we are put in possession of important average observations, which, when taken in connection with other independent facts, will, if the writer mistakes not, place the subject in a much clearer point of view than we have hitherto enjoyed.

It will be remembered, that two modes of investigation have been adopted to solve the problem of respiration: the one, by deducing the quantity of carbon consumed from the quantity of carbonic acid given off by the lungs; the other, by comparing the whole amount of carbon received as food into the animal frame with the carbon conveyed away with effete matter, gave the difference as expressive of the quantity of the carbon removed by the respiratory organs. The latter plan has been adopted by Dalton (whose results do not remarkably differ from those obtained by the former mode), and more recently under the direction of Professor Liebig, the results of which differ so widely and essentially from all the others, that they cannot be rendered available; nor will a practical man have any difficulty in discovering that the whole plan was ill devised, as known sources of error exist at each one of the numerous stages of operation.

Here are, for instance, six different substances to be analysed—bread, potatoes, meat, lentils, pease, and beans;

and every candid person must acknowledge, that the most carefully conducted elementary analysis is subject to appreciable error: we have, therefore, six chances of error to begin with: if the quantity of water in each was estimated by a separate operation, as was the case in the bread, the chances of error amount to twelve; again, these bodies are not definite chemical compounds, but mere mechanical mixtures differing in every part; still further, the portions used for analysis formed but a very small part of the whole. The results obtained, for instance, as the composition of bread were doubtless true, for the three or four hundred milligrammes used for analysis, but cannot be assumed so for 27,936 ounces which were consumed.

These remarks are by no means made in a spirit of hypercriticism, but as an apology, if such can be needed, for not receiving results thus obtained, in opposition to those of the highest authority, by means of other modes which do not participate in so many sources of error.

But, whatever may be thought of Professor Liebig's statements, his reasoning on the respiration is still more unfortunate, as it involves the palpable absurdity, that the part is greater than the whole; that the quantity of oxygen contained in a certain portion of carbonic acid is greater than the quantity of carbonic acid itself: thus, at p. 13, we read:—"If we assume, with Lavoisier and Séguin, in order to obtain a foundation for our calculation, that an adult man receives into his system daily $32\frac{1}{2}$ ounces (46,037 cubic inches = 15,661 grains, French weight) of oxygen," &c. &c.

Now, Lavoisier and Séguin estimated the carbonic acid exhaled from the lungs in twenty-four hours at 8584 grains, or 17,9 ounces, which are equivalent to 13 ounces of oxygen, not $32\frac{1}{2}$ ounces. But the fact is, that the whole table at page 283, note 1, is false, as any person acquainted with the fact, that the volumes of carbonic acid and the quantity of oxygen it contains are so nearly equal as to be considered so in all approximate calculations, will see at a glance. In this table the volume of oxygen is in the first line made more than three times that of the corresponding carbonic acid, and in lines three and four, the smaller quantity of

carbonic acid contains more oxygen than the larger.

Having thus removed the principal stumbling-block from our path, we at once proceed to offer an independent mode of solving the problem of respiration, and then to test its accuracy by the observations of others.

Assuming, as in a former case, that the chyle contains in itself all that is necessary for the fresh deposits in the animal body, whether tissues or fat, it is clear that the sum of the elements of the new deposits will accurately express the sum of the elements of the chyle, however the molecular arrangement of the two may differ; it is also clear, that provided we are able to collect all the ultimate products into which the new deposits resolve themselves, the sum of the elements of these products will also be accurately represented by the sum of the elements of the new deposits: it will therefore be granted, that the original formative body, the chyle, and the ultimate products are legitimate subjects of comparison, and that the sum of the elements of the one may be taken as expressive of the composition of

the chyle + 10 equi. of water = $C_{58} H_{43} N_5 O_{21} + 10 HO$
 $= C_{58} H_{53} N_5 O_{31}$
 $= (C_{53} H_{38} O_{21}) + 5 \text{ equi. of carbonate of ammonia.}$
 (A) and $(C_{53} H_{38} O_{21}) + 123 O = 53 (CO_2) + 38 HO$.

In order, therefore, to convert the whole of the chyle into the ultimate products obtained from the lungs, skin, and kidneys, 123 equi. of oxygen are

$C_{58} : O_{123}$; but $C_{58} = 58 \times 75$; and $O_{123} = 12300$;
 $= 4350$

therefore the ratio $C_{58} \quad 4350 \quad 1$
 $\quad \quad \quad O_{123} \quad 12300 \quad 2,82$

Again, the chyle = $C_{58} H_{43} N_5 O_{21}$
 $= (C_{57} H_{41} N_4 O_{20}) + \frac{1}{2} \text{ equi. of urea} = (C_1 H_2 N_1 O_1)$
 $= (C_{57} H_{29} O_{20}) + 4 NH_3 + \frac{1}{2} \text{ equi. of urea.}$
 (B) and $(C_{57} H_{29} O_{20}) + O_{123} = 57 CO_2 + 29 HO$.

Again, therefore, we require 123 equivalents of oxygen to convert the body remaining, after the elimination of urea and ammonia from the chyle, into carbonic acid and water.

We therefore assume, that the quantity of the carbon in the urea secreted, is to the oxygen obtained by respiration, as C : O_{123} , or 75 : 12300, and to the whole amount of carbon in the chyle as 1 : 58. The practical observations of others agree well with this hypothesis, as will be seen in the

the other. Now the ultimate products of the disintegration of animal bodies, may, in a practical point of view, be confined to urea, carbonic acid, and water. It is true that we are unacquainted with the composition of the peculiar fatty matter secreted by the skin; but this is so small a quantity, as compared with the others, that it may be practically neglected, and will, even with the addition of organic elements which separate from the body in the form of hair, nails, &c. be found to involve but a very small fractional error in calculation. The problem, then, to be solved, resolves itself simply into establishing the relation between the sum of the elements in the chyle, and those which pass out of the body in the form of urea, carbonic acid, and water. As a preliminary step, we proceed to determine the quantity of oxygen necessary to resolve the elements of the chyle into the above three bodies; or, as urea may, by the mere addition of the elements of water, be converted into carbonate of ammonia, into the three binary forms, carbonic acid, water, and ammonia; thus—

necessary: the ratio, then, of the carbon taken in the food to the oxygen obtained by the act of respiration is—

sequel. With reference to the quantity of carbon consumed, the tables of Andral, Gavarret, and Scharling, as given in the Chemical Gazette, p. 156 and 157, 1844, are made use of, as they contain a summary of no less than 90 observations, on different persons, at various ages, made by night as well as day. For the quantity and analysis of urine, the tables of M. Alfred Becquerel are referred to, as these have obtained the sanction of the very extensive clinical experience of Dr. Prout and

Dr. Golding Bird: they are recorded in Dr. Prout's work "On Stomach and Urinary Diseases," p. 519, last edition.

According to the tables on respiration, it is stated, that the average of carbon expired per hour, after corrections for moisture, is 11,2 grammes; the maximum, according to Brunner and Valentin, 11 grammes; but a small portion of carbonic acid is also exhaled by the skin (Dalton estimated this quantity at $\frac{1}{4}$ of an ounce per diem): we shall be perfectly safe, then, in assuming the quantity of carbon given off per hour, by lungs and skin, as 11,2 French grammes; this, for the twenty-four hours, amounts to 8,64 English ounces. If, then, there be any truth in the statement above, that the carbon in

226,802 grains + 146,467 grains = 373,269

= 0,77 of an ounce,

but urea = $C_2 H_4 N_2 O_2 = 754$,
and $C_2 = 150$,

therefore the amount of carbon contained in urea is as 150 : 754,

or 1 : 5;

and therefore the quantity of carbon in the urea = 0,77

5

= 0,155 of an ounce.

We have also seen above, that the quantity of carbon, calculated on hypothesis, is 0,148 of an ounce; a coincidence which is remarkable, and calculated to give some confidence in its truth.

The pathologist will now trace the connection between diminished action of the lungs, as in "phthisis pulmonalis," and the tendency to secrete an abnormal proportion of lithic acid, when compared with the urea; he will also see why, in cases of excessive secretion of urea, the quantity is greater during the night than the day, the intensity of respiration during the day being to the night as 1,24 : 1. It is evident, that in the latter disease one of two things must happen; either the intensity of the respiration must become inverse to the disposition to form

$(C_{57} H_{29} O_{20}) + O_{123} = \{C_{57} H_{20} O_{20}\} + H_9 + O_{123}$
 $\{C_{57} H_{20} O_{20}\} + O_{114} + 9 \text{ equi. of water.}$

And this agrees with the universally acknowledged fact, that the volume of CO_2 given out never equals that of the oxygen inspired; and the above formula shows that, from the very nature of the case, it never can.

Now, on comparing the quantity of

$C_{58} : O_9 :: 4350 : 900$

and 4350 : 900 :: the whole quantity of carbon

eliminated

: 8, 64

: the deficient quantity

of oxygen

: 1,78

the urine is to that of the chyle as 1 : 58, the quantity of the former is, by calculation, $\frac{8,64}{58} = 0,148$ of an ounce, and this is well borne out by Dr. Prout's tables: thus, 35 fluid ounces of urine, sp. gr. 1020, passed in twenty-four hours, contains 226,802 grains of urea, and 146,467 of other organic matter, in combination with ammonia. Professor Liebig and Dr. Enderling have recently denied the existence of lactic acid in urine, but, whatever this small portion of organic matter may be, the circumstance of ammonia being present renders it perfectly safe to consider the ammonia compound as represented by the formula for urea. Now,

urea, or emaciation must result from the rapid elimination of tissues.

But there is another point to determine. On comparing the formula for the chyle with the quantity of oxygen obtained by respiration, we find an excess of this element; thus, C_{58} requires only 116 equivalents of oxygen, while both my hypothesis and the facts of the case arrive at 123 equivalents; how, then, is this excess of oxygen disposed of?

On referring to equation (B) it appears, that of the 29 equivalents of water supposed to be formed during the process of elimination, 9 must be formed into water, at the expense of 9 out of the 123 equivalents of the oxygen furnished by the respiratory process. Thus,

oxygen thus absorbed, by hypothesis, with the whole quantity of carbon contained in the chyle, we arrive at as near an approximation as we can possibly expect to the quantity of oxygen actually found by direct experiment to have disappeared, for

But the quantity of oxygen required to convert carbon 8,64 ounces into CO_2 is 23,04; the whole amount of oxygen inspired is, therefore, 24,82, and Brunner found, as an average of twelve experiments, that the volume of oxygen inspired was to the volume of carbonic acid formed as 4,720 : 4,356; the deficiency is therefore 0,364; which is also confirmed by Professor Valentin's mean of twelve experiments; and on comparing this with the whole quantity of oxygen, according to the experimental data, we have 4,720 : 4,356 :: 24,82 : 1,9, having obtained 1,78 by hypothesis.

Nor does this theory fail to assist us in the remarkable case of carnivorous animals. It has been seen above, that the quantity of oxygen which dis-

$\text{C}_{5.8} \text{H}_{4.3} \text{N}_5 \text{O}_{2.1}$ becomes $(\text{C}_{5.8} \text{H}_{4.3} \text{N}_5 \text{O}_{2.1}) - (\text{C}_5 \text{H}_1 \text{N}_3 \text{O}_5)$
or $(\text{C}_{5.3} \text{H}_{3.3} \text{O}_{1.6})$ $- 2\frac{1}{2}$ equi. of urea.

Now, to convert $\text{C}_{5.3} \text{H}_{3.3} \text{O}_{1.6}$ into carbonic acid and water, 123 equiva-

$\text{C}_{5.3} \text{H}_{3.3} \text{O}_{1.6} + \text{O}_{1.23} = \text{C}_{5.3} \text{H}_{1.7} \text{O}_{1.23} + 16$ equi. of water.

We have, therefore, a demand for an excess of 17 equivalents of oxygen, instead of 9. This is only one of many modes of showing that an excess of oxygen involves an excess of hydrogen to be oxydised, and has been selected as the most simple case; but others are sufficiently obvious. By referring to the analysis of the urine of the lion, tiger, and leopard, by Hieronymus*, it will be seen that this fluid contains 13,2 per cent. of urea; the average of human urine only 1,4 per cent.; the hypothetical assumption is, therefore, fully borne out by fact.

It will now be necessary to examine Professor Liebig's views with reference to the bile, as an agent in respiration, which are, however, from beginning to end, so contrary to analogy and fact, that were they not extensively circulated, they would not be worthy of serious notice. The whole error has arisen from a want of practical knowledge of the subject, and a very partial record of the testimony of others. At page 64 of his "Animal Chemistry," he has stated, on the authority of Burdach, that man secretes daily 17 to 24 ounces of bile; a large dog, 36 ounces; a horse, 37 lbs.; now, on referring to Burdach, it will be seen that he merely

appears in man during respiration is, according to Brunner and Valentin, $\frac{1}{13}$ of the whole amount; Dulong also found it about $\frac{1}{10}$; but in carnivorous animals the loss was as much as $\frac{1}{5}$ to $\frac{1}{2}$; it is evident, then, that however the law of the diffusion of gases may explain the phenomenon in graminivorous mammals, here it utterly fails. In the theory of the bile I deduced a formula for the chyle, from the analyses of Marcet and Macaire, which proved the remarkable fact, that this primoformative body is represented, both in carnivorous and graminivorous mammals, by the same formula, $\text{C}_{5.8} \text{H}_{1.3} \text{N}_5 \text{O}_{2.1}$; and by supposing that the whole of the nitrogen is eliminated in the form of urea,

lents of oxygen are required; thus—

quotes the opinion of Schultz, as deduced from most exceptionable experiments, in order to controvert them; which he does by a most masterly "reductio ad absurdum." "Sollte nun," says Burdach, "ein Ochs eben so viel Speichel wie nach Schultzen's Meinung ein Pferd, nämlich 10 Pfund, secerniren, so würden diese beiden Secretionen allein, binnen 24 Stunden so viel betragen als die gesammte Blutmasse."

But we have no occasion in this instance to resort to analogical reasoning, as we possess facts of a most determinate character for our guidance. It has already been shown, that the bile, from its composition, is most probably destined for a much more important object than merely to re-enter the system in order to be eliminated in the form of carbonic acid and water; it has also been shewn, that the food of all animals contains one portion, which absolutely requires to be combined with a body consisting of the same elements, in precisely the same proportion as the bile, before it can be converted into chyle. In a paper, which will shortly appear, on Digestion, Assimilation, and Nutrition, it will be proved, from the noble researches of Boussingault, that the whole of the bile which can be supposed to be secreted is necessary for the conversion of the non-azotised portion

* Lehrbuch der Chemie, von J. J. Berzelius, neunter Band, S. 460.

of the food into the nutrient fluid; and those who have made direct experiments on the subject, know well that the bile, when perfectly freed from mucus, and exposed to a moderate temperature and atmospheric air, is not disposed to give off its carbon in the form of carbonic acid, whereas fibrine or blood, submitted to the same conditions, eliminates its carbon in the usual binary form with the greatest facility: the bile is, in fact, by no means suited for the production of carbonic acid in the way alluded to, while the fibrine is eminently so.

Without attaching undue importance to the above views; without presuming to think that subsequent discoveries may not render some modification necessary; and above all, without in the slightest degree interfering with that broad line of demarcation which sound philosophy will ever interpose between what *may be* and what *really is*; the writer believes, that many portions of the above reasoning will be considered as near an approach to demonstration as moral evidence admits of, and that this theory accounts more fully and satisfactorily for the facts of the case, than any other which we at present possess.

The principal points of the above paper may be summed up as follows:—

1. That respiration, urinary secretion, and exhalation, so far as it regards the moisture formed by the excess of hydrogen in the matters eliminated, stand in a certain determinate relation to each other; and this relation is such, that if one of these functions vary in intensity, the others will vary also, either directly, and in that case the elimination of tissues becomes increased in proportion, or inversely, in which case they may be considered as mutually compensative.

2. That the excess of oxygen absorbed, with respect to volume, over the volume of carbonic acid exhaled, is fully explained by the circumstance that the quantity of oxygen in the effete matters is not sufficient for the oxidation of the hydrogen. The theory, however, does not suppose that this change is confined to any one part, the lungs for instance, but occurs in every portion of the animal frame in which the elimination of effete matters takes place through the agency of oxygen.

3. That the same laws, both of orga-

nization and dis-integration, are observed in graminivorous as carnivorous mammalia, and that these laws act under precisely similar conditions; nor is it necessary to suppose that in the former class of animals the non-azotised portion of the food affords carbon for the production of carbonic acid in the lungs: nor is it consistent with structural or physiological facts, that any part of the amylaceous portion of the food is converted into carbonic acid before its assimilation and adaptation to some part of the animal frame. The carbonic acid is, in fact, as much the result of elimination of effete matter in the one class of animals as in the other.

4. That neither is the bile a source of carbon for the lungs, as it is not adapted for the elimination of that element under the conditions which are present, viz. under the influence of moderate heat, oxygen, and moisture, but is required for the assimilation of the non-azotised portion of the food.

5. That these theoretical deductions are borne out by chemical and physiological observations, so far as carnivorous and graminivorous mammalia are concerned. The biliary fluid and chyle of serpents and birds not having been examined, we are clearly without the data for explaining the process of respiration, as it occurs in their cases.*

Douglas, Isle of Man,
Oct. 29, 1841.

* As this paper may fall into the hands of those who entertain a justifiable degree of jealousy at any expressions assuming a mathematical form, which are not adapted to strictly mathematical treatment, it may not be amiss to subjoin, that, in reasoning on the interchange of elements in organic bodies, the sums and differences alone of the elements are regarded, and thus the expression $C_{58}H_{43}N_5O_{21}$, for example, implies merely, that the chyle is composed of these elements in the proportions stated, in a certain molecular condition essentially differing from their mere addition: the formulae, $N+O$ and NO , equally well express the presence of nitrogen and oxygen in the ratio of their equivalents, but the one represents atmospheric air, a mere mechanical mixture; the other, protoxide of nitrogen, a chemical compound. In reasoning of this kind, compound bodies are considered as disintegrated, and the numbers expressing the equivalents of each element are then used as co-efficients, nor can these conventional formulae, as universally adopted in Germany, occasion any confusion, as they differ from any known mathematical expressions. The exponential mode of expression as used in France, should undoubtedly be abandoned; the formula $(H+O)^n$, leads instinctively to expansion by the binomial theorem, producing a series of compounds which would astonish most chemists.

ANALYSES AND NOTICES OF BOOKS.

“L'auteur se tue à allonger ce que le lecteur se tue à abrégé.”—D'ALEMBERT.

Medico-Chirurgical Transactions, published by the Royal Medical and Chirurgical Society of London Vol. the XXVIIth; of New Series vol. the XIXth. London, 1844.

THERE are usually phases in the life of learned societies as well as in the life of man. They are weak at first, or they are strong; but, in either case, they are generally instinct with power, so that the weakness will often grow into strength, the strength will advance to lusty manhood. By and by, however, the spirit that seemed to animate them flags; as in a tree, the fruit-bearing boughs of earlier periods become old, and cease to put forth blossoms, or they are pruned away one after another, until by the time that a single generation of men has run its course, the tree often stands there with nothing of its original parts about it save the trunk; and the trunk, we know, though indispensable, is yet the least essential portion of the tree; for strip the trunk of all its buds, it will inevitably die, whilst each individual bud, set by itself, or grafted on another stem, will rise up an independent plant.

Even so it is with learned societies; they have their periods of vigour in the majority of instances, and then they have their periods of decline. It is not often that they oscillate betwixt strength and weakness, betwixt growth and decay. Yet they do sometimes, and the causes, or assignable causes, of each estate, vary in different cases. Sitting still too long in one place has occasionally seemed the most potential cause of decay; and again, removal from the original soil has seemed to bring the blight. But in other and more fortunate instances removal has appeared to exert the happiest influences. The Royal Medical and Chirurgical Society is one of those which has pursued the tenor of its way pretty evenly, on the whole; it has had its periods of splendour and of more moderate lustre, but it has never suffered anything like a total eclipse. The Society had rather languished for some years in Lincoln's Inn Fields; the necessity for a westward move, which may be

called the natural course of society as well as of the sun, had for some time been felt, and after long and anxious search for a house, the one in Berners Street was found, and the Society removed thither, we forget how many years ago—some ten or twelve at least. This event was a new epoch in the Society's prosperity; the meetings were soon better attended than ever they had been in Lincoln's Inn Fields; new members began to come in in shoals; the funds, from being somewhat crippled, became prosperous; the volume of Transactions, instead of being a burthen, proved a source of revenue; and under the brilliant presidencies of Dr. Bright and Sir Benjamin Brodie the Society may be said to have reached its acmé. Let it not be forgotten, however, that it was under the presidency of Dr. Elliotson, in 1835, that the grand start in the prosperity of the Society's affairs was made. In the joint names of John Elliotson, Doctor of Physic, Sir Astley Cooper, Bart., and John Yelloly, Doctor of Physic, a petition was presented to His Majesty King William IV., praying for a Charter of Incorporation for the Society, which was most graciously granted on the 30th of September, 1835, since which time the Society has had the prefix of Royal, and the members have been designated Fellows. The printed list of members in this year occupies about fourteen pages; the list in the volume which has just appeared takes up as many as twenty-eight pages,—an extension from which the augmented prosperity of the Society may be surely inferred. It is with great regret, however, that we perceive the name of Dr. Elliotson withdrawn from the list of Fellows; the benefactor of the Society, as its active officer, and for many years the unwearied contributor to its Transactions, ought still to be found on its roll. The unhappy and much-
vexed question of mesmerism was, we believe, the cause of Dr. Elliotson's secession from the Society.

Contemporaries, and parties near at hand, judge of societies by the attractions they present at their public meetings; posterity, and those at a distance, form their estimate from the contents of the published volumes of Transactions. During the earlier period of the Medico-Chirurgical Society's existence, it was by no means held necessary to

publish a volume every year. One in two, or sometimes even more, sufficed to embrace everything that was deemed worthy to see the light under the ægis of the Society. Of late years the Society has felt it a duty to publish every year. Of course, when very rigid selection is made, the article may be presumed to come out more intrinsically valuable; and it is unquestionable that the earlier volumes of the Transactions of the Medical and Chirurgical Society will for ever remain monuments of the activity and discrimination with which medical science was cultivated in England during the period of their appearance. But we are by no means disposed to be the laudator temporis acti,—to find nothing good or praiseworthy that is not covered with the rust of time; on the contrary, we always hail these volumes of the Royal Medical and Chirurgical Society as precious land-marks in the onward course of medical experience; and greatly prefer the average samples they afford each year, to the picked specimen they would present did they only appear at intervals of two or three years.

Abstracts of all the papers contained in the present volume have already appeared in our pages, and for the major part some account of the discussion which usually follows the reading of a paper at the Society. We shall therefore do no more than give an abbreviated catalogue of the contents of the volume, by way of remembrancer, or finger-post, to our readers.

Cases of Rupture of the Ureter or Pelvis of the Kidney from violence, by Mr. Stanley. A Case of Cysticercus Cellulosa of the Brain, by Mr. Otley. On the presence of Spermatozoa in the Fluid of Hydrocele, by Mr. Dalrymple. Cases of Carcinoma of the Thyroid Gland, by Mr. Caesar Hawkins. On the Admission of Air into Veins, by Mr. Bransby Cooper. On a Horn developed on the Human Skin, by Mr. Erasmus Wilson. On the Early Organization of Coagula, by Mr. Dalrymple. Case of Extirpation of Ovarian Tumor, by Mr. Greenhow. On the State in which Uric Acid exists in the Urine, by Dr. Bence Jones. Case of Carcinoma of the Lungs, by Dr. George Burrows. On Acute Diseases of the Larynx and Trachea, cured by Tracheotomy, by Dr. J. A. Wilson. On the Presence of Oxalate of Lime in the

Urine, by Dr. Jones. On Obstructions of the Branches of the Pulmonary Artery, by Mr. Paget. On the Composition of the Meconium, by Dr. Davy. On Paracentesis Thoracis, by Dr. Hamilton Ree. Case of Empyema, by Dr. Theophilus Thompson. Omental Sacs in Hernia, by Mr. Hewett. Case of Dissecting Aneurism of the Aorta, by Dr. Todd. Case of Aneurism of the External Iliac Artery, in which the Internal Iliac was tied, by Mr. Hey, York. Cases of Tubular Expectoration from the Lungs, by Dr. Reid. A Tabular View of the Seat of Tubercle in 180 Cases, by Dr. P. H. Green. Case of Tumour of the Right Hypochondrium, with Evacuation of Biliary Fluid, by Mr. Barlow. Case of Gelatiniform Cancer, by Dr. Warren, U. S. Examination of a Cyst containing Seminal Fluid, by Mr. Paget. Records of Progress of Asiatic Cholera, by Dr. S. W. J. Merriman. Case of Necrosis of the Lower Jaw, by Mr. Sharp, Bradford. On Mollities Ossium, by Mr. Solly. Case of Fistula between Bladder and Ileum, by Mr. Worthington. On the Recorded Cases of Operations for Extraction of Diseased Ovarian Tumours, by Mr. Phillips.

MEDICAL GAZETTE.

Friday, December 6, 1844.

“Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tuæ; potestas modo veniendi in publicum sit, dicendi periculum non recuso.”

CICERO.

THE DILEMMA, AND REMEDY THE SECOND.

ASSOCIATION OF THE GENERAL PRACTITIONERS INTO A DISTINCT COLLEGE, INCORPORATED BY ACT OF PARLIAMENT, HAVING AN ELECTIVE COUNCIL, A COURT OF EXAMINERS, AND POWER TO FRAME BYE-LAWS, AND TO EXAMINE AND LICENSE ALL FUTURE GENERAL PRACTITIONERS*.

WE began with the College of Physicians as the means of helping us in our present difficulties, that being the chartered body which has the first claim to consideration from its antiquity, which has about it the highest

* Vide Marylebone Manifesto, p. 12.

prestige (to be guilty of using a French word), and which would, as we apprehend, most effectually aid the medical profession with the public, place it higher in general estimation, and raise the character of the mass of its constituent members—to say nothing of the great accession of influence and of wealth, of wealth and of influence, that would be gained in this way by the College. Association of the general practitioners with the College of Physicians, we are clearly of opinion, would be the best thing for all parties—for the profession and for the public.

The next best thing that could be done, in our apprehension, would be the association of the mass of the profession with the College of Surgeons. This institution is rich, is influential; always numbers the leading members of the surgical arm of the profession in its Council and Court of Examiners, and occupies a large space in the public attention. Its noble museum and copious library give it a farther and powerful hold upon professional sympathies.

Our views upon this subject are already well known: we believe that the union would readily have been—could still readily be—effected, to the immediate cementation of all differences, to the instant assuagement of all angry and discordant feelings. There would then be an united and most powerful medical profession, with the College of Surgeons for its head instead of the College of Physicians; this would be the only difference. Our plan for bringing about this union would simply be, to draft in as Fellows or Associates of the College, and give a voice in the election of the Administrative Council to, all who had been members for five or ten, or any intermediate number of years; those who are now members, and have been so for a smaller term of years than that determined on, to be received as

Fellows or Associates on attaining the prescribed standing.

The exception we would make—and even this would be a kind of straining of authority—would be based on the ground that as it was the *profession* of surgery, or of medical surgery, which was to be represented, and not the traffic in drugs and chemicals, so no one should be admissible to the rank of Associate or Fellow who kept an open shop, or had his window ornamented with red and blue bottles, who sold Daffy's elixir, and the best Windsor soap, &c. The stipulation should be, that the medicine room should be strictly private.

This we apprehend is the arrangement that would give greatest satisfaction to the general body of the medical practitioners of England, almost every man among whom of any name or influence is a member of the Royal College of Surgeons. This too is the union for which the members of the College of Surgeons have been contending ever since we remember the subject of Medical Reform, in anything of its present shape, discussed in London; it is that for which meetings were held at Freemason's Tavern, in 1828, we think, and which has been smouldering ever since, though breaking out at intervals only into a fitful flame; it is that which, when we look at our brethren as composed of Englishmen, we must suppose can never be given up, until it has been granted; though when we see them in their professional capacity, we are rather more inclined to doubt and despair; for there is, in truth, a sad lack of independent feeling among us: defective elementary education it is which always makes the great mass of the medical profession the slaves in some sort of the leading medical, and especially of the leading surgical, practitioner of the day.

So much by way of preface to the subject of our text: THE ASSOCIATION

OF THE GENERAL PRACTITIONERS INTO A SEPARATE COLLEGE. We are clearly of opinion that this proposition is a false step on the part of the leaders of the great body of the medical profession. The thing is not only against the views and prejudices of the community, but also of the medical profession itself. A College of general practitioners in the present day, incorporated by all the Royal Charters in the world, would never have more of public weight and authority than any private Medical Association—the Royal Medical and Chirurgical Society, for instance, or the Medical Society of Bolt Court. Supposing this College of General Practitioners to have wrung by force of right and respectability, and on the ground of refusal of other corporate bodies to receive them, a Charter of Incorporation from Government, and even the right to examine and license the future general practitioners, our conviction is that they would still be very little farther forward than they are at the present moment. A diploma, being a mere certificate of competency,—and we presume that the College of General Practitioners could never aspire to grant more than this,—is a totally different affair from a diploma that confers a degree or title, such as that of Doctor in medicine. The public do not ask whence the title came, seldom how it was obtained; it commonly passes current unquestioned; and even if questioned, and it be found of Giessen or Erlangen origin, it is little less thought of than if it had been won by long years of study at the alma mater which accords it, and of searching examinations successfully passed. The title-conferring diploma suffices, then, and goes unquestioned under any circumstances. Not so the simple certificate of competency. That is valuable only as it has been granted by men who are themselves acknowledged competent, whose names

are familiar to the world, and who have reputation in the republic of letters and science as well as of practice. But such names a College of General Practitioners cannot at this time, and probably never could, command. Why are not the practitioners of England content with their license from Apothecaries' Society? It is all they require to have in law; it is sufficient to start upon in so far as qualification goes; but it has not the weight, because 1st, it confers no title, and 2d, because it is given by men who, however respectable and esteemed by their own immediate circle of friends, are utterly unknown to fame. Who, in fact, ever prided himself on his certificate from the Apothecaries' Society, and in what department of the public service is it particularly considered? Yet is it not notorious that the examination there is searching, extensive, embracing a great variety of subjects, and to be honourably gone through requiring a large amount of general knowledge? It is all this, and yet the certificate to which it is a prelude is not esteemed. The examination at the College of Surgeons, on the contrary, is comparatively easy; it embraces few topics, it requires little preparation to be gone through successfully, yet are the letters-testimonial which it secures of the highest importance to a young man in making his entrance on the stage of life. Wherefore this difference? Because the examiners occupy a considerable space in the public eye; because from their position as hospital surgeons and teachers they are in a condition to keep themselves constantly before the world—are necessarily and without effort kept constantly before the world; and because some of them at least have distinguished themselves in the science of their profession, and their names are as familiarly known in Paris, Berlin, Vienna, and Washington, as in London.

—No, we say, emphatically *no*; a College of General Practitioners may be numerous, may be—would be—respectable, but it can never be powerful. It would at best be another Apothecaries' Hall; a licensing shop, to which men might find it necessary to go in order to obtain the privilege of practising, but whose certificate of competency could never have any weight. And we greatly mistake our brethren if they would be content with the achievement of any *such* independence as this.

Without the privilege of licensing future general practitioners, we presume that incorporation into a separate College would not be contemplated by the present body. But we see serious difficulties in the way of their obtaining such a privilege. The College of Surgeons would certainly oppose themselves to its being granted, and we rather think that they would do so successfully. The College of Surgeons became the voluntary custodiers of the Hunterian Museum, which cost the country the sum of £20,000 to the heirs and assigns of John Hunter, and which has been kept up in its hitherto unrivalled state of preservation, at the sole expense of the College—an expense it is said little short of £5000 per annum. Did government grant the power of licensing the general practitioner to any new College or corporation, it would of course and necessarily make itself accessory to the diversion from the College of Surgeons of those funds by which that body is enabled to meet this heavy item of expense, and would have to take another burthen on its already heavily laden shoulders; and we are very much mistaken whether any ministry will ever voluntarily do any thing of the kind.

WE desire to direct our readers' attention to an able article by Dr. Scott Alison, founded on the Report for the Royal Commission of Inquiry into the Operation of the Poor-law in Scotland, and on Dr. W. P. Alison's Remarks on

that Report. We shall have occasion to return to this subject by and by. It is really one of the most important that can engage the attention of the enlightened physician and philanthropist at the present moment.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

WE have more than one urgent letter upon the dreadful state of the ventilation, and insufferable heat, of the place of meeting of this society. We remember something of the same kind last season. Fellows stay away from the meetings that they may escape not only much present discomfort, but prospective indisposition of a sufficiently distressing nature. One correspondent says, that "in a room of no very large dimensions, between one and two hundred persons were crowded, themselves sufficient to vitiate an atmosphere of twice the cubical contents in one-fourth the time during which they are there assembled, whilst eight large gas-lights are kept flaming nearly, if not quite, at the top of their power." Surely this is a state of things that might be remedied. We beg very respectfully to call the attention of the Council of the Society to the subject.

DISCOVERY OF THE NINE MISSING BOOKS OF GALEN'S PRINCIPAL ANATOMICAL WORK.

[We have the following from a learned and much esteemed correspondent. We beg to direct the particular attention of the Sydenham Society to the discovery.]

A very interesting and valuable discovery has lately been made at Oxford, which it seems right to lay before our medical brethren, though we are almost afraid that its importance will be better understood and more justly appreciated in France and Germany than in Great Britain. It is well known that Galen's principal anatomical work, called *Περὶ Ἀνατομικῶν Ἑγγεγραμμένων*, *De Administrationibus Anatomicis*, consisted originally of fifteen books, of which only eight and part of the ninth have come down to us. The contents of each book are mentioned by himself (*De Libris Propriis*, cap. 3, tom. xix. pp. 24, 25, ed. Kühn) from which account it appears that the last six treated of the eyes, tongue, œsophagus, larynx,

os hyoides, the nerves belonging to these parts, the arteries, the veins, the nerves arising from the brain, those arising from the spinal marrow, and the organs of generation: so that Galen's account of several of the most important parts of the body is contained in the lost books. In Ackermann's *Historia Literaria* prefixed to Kühn's edition of Galen (p. lxxxiv.), we find the following notice:—"E Golii Arabico codice libros xi usque ad xv editurum se promiserat Thomas Bartholinus, *De Libris Legendis*, Dissert. iii. p. 75 [p. 58, ed. 1711]. Erant Galeni *De Administr. Anatom.* libri sex postremi cum adnotationibus Jacobi Golii in Bibliotheca Narcissi, Archiepiscopi Dublinensis, n. 1787." No further information on the subject could Ackermann (who was a most diligent and accurate inquirer) obtain; nor apparently could Kühn himself, who, in the last volume of his edition of Galen, corrects some errors and supplies some omissions. In turning over the pages of a very different work, J. G. Wenrich's Dissertation "*De Auctorum Græcorum Versionibus et Commentariis Syriacis, Arabicis, Armeniacis, Persicisque*," (Lips. 1842, 8vo.) we noticed that two copies of the Arabic translation were said (p. 245) to exist in the Bodleian Library at Oxford, one consisting of fifteen books, the other only of the last six. Upon referring to Uri's Catalogue of the Oriental Manuscripts of the Bodleian (p. 135), we found that the latter manuscript was said to be in the hand-writing of Golius himself, that it had belonged at one time to Narcissus Marsh, Archbishop of Dublin, and was therefore probably the very MS. spoken of by Ackermann; and the actual examination of the two MSS. in question has shewn us that the modern one was copied from the other, the pages of the original being marked in the margin of the transcript. The original MS. is written on oriental paper, and by an oriental scribe, and contains the complete work of Galen in fifteen books. It was bought at Constantinople for forty-eight florins (rather a large price), but by whom is uncertain, nor is anything else known of its history, except that it once belonged to the Archbishop of Dublin, though it does not appear in the list of his MSS. contained in the *Catalogus Librorum*

MSS. Angliæ et Hiberniæ, printed in 1697. It appears to have been seen and used by Golius (a celebrated Arabic scholar at Leyden), who must have known that the Greek copies of the work contained only nine books, and accordingly copied the remaining six with a view to publication. He did not, however, transcribe the remainder of the ninth book, which is wanting in the Greek copies, and which is about twice as long as the portion hitherto known in Europe. The MS. was either given as a present by Golius, or bequeathed as a legacy at his death in 1667, to Thomas Bartholinus the elder, Professor of Anatomy at Copenhagen, and was in his possession in the year 1672, when he wrote his work *De Libris Legendis*. Probably after his death in 1680 it came into the hands of Narcissus Marsh, Archbishop of Dublin, and appears in the catalogue quoted above. From him it came either by gift or legacy to the Bodleian Library at Oxford, where it still remains, together with the original MS. from which it was transcribed. It should be added that (as far as we are aware,) no other copy of the Arabic translation is to be found in any European library; nor do any of the old Latin translations contain the last six books of the treatise.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Tuesday, December 3d, 1844.

DR. THEODORE GORDON, V.P. in the Chair.

Case of immense accumulation of Indurated Faeces in the Rectum, and complete suppression of the Alvine Evacuations for a month. By EDWARD HOCKEN, M.D. Physician to the Blenheim Street Infirmary, &c.

THE patient was first seen by the author in consultation with Mr. Whidborne, of Queen Square, on the 10th of June, 1844. She was then much emaciated and exhausted; the pulse 136 in the minute, and very feeble. Complaints were made of severe agony in the rectum and lower part of the belly, which latter was distended, firm, and highly intolerant of pressure. No faeces had been passed for a month, and injections, which had been frequently used, came away only slightly coloured. Food was rejected by vomiting a few minutes after it was swallowed, and even liquids rarely remained on the stomach. The vomited matters had been dark and offensive some few weeks previously, and during the course of the complaint there had been an

offensive discharge from the vagina. There were frequent efforts to go to stool from the exhibition of purgatives, which occasioned the most frightful agony, and eversion of the mucous membrane through the sphincter. On examination, the rectum was found to be completely blocked up, and enormously distended by indurated faeces, to within an inch of the anus,—bulging into, and nearly obliterating the vagina. The rectum was, however, so intolerant of the slightest touch that an opiate suppository, and a draught with hyoseyamus, were directed, to prepare the parts for further proceedings, the author intending to obtain the advice and assistance of Mr. Storks, in the interval.

History.—Three months before, the patient fell over a tray whilst nursing an infant, by which the thighs were widely and violently separated. The accident occasioned much pain, followed by menorrhagia, constipation, and the formation of indurated lumps, which were passed with much pain and difficulty. This increased till about a month ago (from June 10th), since which there has not been the slightest alvine evacuation per rectum. During her illness she had been attended by several medical men, some of whom attributed the symptoms to cancer, and others to a tumour pressing upon and obliterating the rectum. Preparations of opium had been used generally and locally, frequent enemata, and occasional purgatives.

June 11th.—The author met Messrs. Storks and Whidborne in consultation. The patient, who was almost incapable of standing, from weakness, was placed at the foot of the bed, her feet on the ground, and the trunk of the body at right angles with the thighs, lying on the bed. By means of a lithotomy scoop and the finger, Mr. Storks succeeded with some difficulty, and much pain to the patient, in breaking down and removing portion after portion of the indurated mass—some of these lumps of about three inches in diameter, which had been placed transversely in the rectum until the gut was emptied as far as could be felt. It was then washed out by a powerful stream of water from a syringe. The portions brought away were very considerable in quantity, of a most firm and unyielding description, and of a dark brown colour. It required very considerable force to remove some of these masses, so that the sphincter was slightly ruptured at its posterior part, and the patient suffered much pain from the operation.

3ss. doses of Castor Oil, with five minims of Liq. Opii Sed., were ordered every three hours, and simple enemata, with Olive Oil, every four hours.

In the evening the patient appeared much improved, and had brought off a consider-

able quantity of dark, liquid faeces, with numerous indurated lumps, apparently moulded in the cells of the colon. Abdomen very intolerant of pressure: a flannel wrung out in hot water, and then saturated with purified oil of turpentine, to be applied—and to continue as before. About forty masses of indurated faeces were passed with the motions on the following day. On the 13th and 14th the patient suffered much from severe pain and tenderness of the hypogastric region, and along the course of the rectum, for which leeches, counter-irritation, opiate enemata, and calomel and opium, were used, with a poultice to the arm. She was much better on the 15th, a large quantity of dark bilious matter having been discharged from the bowels. Acute inflammation of the vagina, with ulceration and oedema of the vulva, came on on the 16th; the uterus was low down, swollen, and tender. This condition, with more or less relief, continued till the 25th, when she went into the Middlesex Hospital. During the whole time the bowels were freely relieved, and on the 24th she had two stools of fluid flocculent matter, of a healthy colour, and unattended by pain or tenesmus.

In a note to the author, Mr. Arnott has given an account of the case up to the 22d of August. The inflammation of the vagina had continued, but from the complaints and resistance of the patient it had been found impossible to use injections, and the vagina had become partially closed by adhesions. The uterus felt enlarged and indurated from the rectum, and there was an offensive discharge from the vagina; hence Mr. Arnott inferred that malignant disease of the womb existed. The author remarked that it was curious that so many medical men had attended the patient without discovering the true nature of her complaint. He attributed this to their all having examined the patient per vaginam, and not per rectum. The value of the operation was seen in the restoration of the alvine evacuations and the relief of the symptoms; for throughout the course of the complaint there was a remarkable discrepancy between the severity of the pain complained of, and the quiet and favourable aspect of the symptoms. The impression of the author, from examinations per vaginam, was that scirrhus did not exist, but if it were present—as was Mr. Arnott's opinion—it was doubtful whether it was produced by prolonged irritation in a predisposed individual, or had existed previously to the commencement of the symptoms, and previous to the accident.

Mr. Macilwain considered that the subject of constipation was interesting to the practitioner in a point of view which had not been alluded to in the paper; viz., its

occasional simulation of other diseases, particularly of abdominal tumor. Cases in which this had occurred had frequently come under his notice. In one instance—a lady, the subject of habitual constipation—a tumor, occupying the right side of the abdomen, had existed for months, and been treated by a variety of means—among others, by leeching and blisters. The tumor was well defined, and painful and tender to the touch. Temporary relief was afforded by the means employed, but the swelling remained of the same size, and the medical attendants were quite at a loss to determine its real nature. At length he, Mr. M., was consulted, and, looking at the previous history of the case, and other circumstances, he suggested that the swelling might be dependent on a collection of feces in the abdomen. Mild aloetic doses were administered, and in the course of thirty-six hours the tumor was removed, large fecal evacuations having followed the use of the medicine.

Dr. Murphy, in some cases of obstinate constipation, had found a mechanical obstruction in the rectum, in the form of bands passing across the bowel just above the sphincter. Such a cause did not exist in Dr. Hocken's case.

Observations on the Relaxed Rectum. By
H. HUNT, M.D.

The author describes this as a malady of not unfrequent occurrence, and productive of much inconvenience and distress. The most prominent symptoms are obstinate constipation, a frequent desire to evacuate the bowels, a constant sensation of load in the rectum, which is not relieved by an evacuation, and the discharge, after much forcing, of mucus streaked with blood. The bladder, urethra, and other adjacent organs, often participate in the irritation.

On examination, the rectum will be found preternaturally enlarged, and more or less filled with large folds of mucous membrane pressing down on the anus, which impede the evacuation of the feces, introduction of instruments, and injection of enemata.

This morbid condition of the mucous membrane the author attributes to a neglected state of bowels, and repeated and great distension of the rectum by feces, which causes the mucous membrane, when the bowel is empty, to hang in loose folds.

This disease, if neglected or mismanaged, gives rise to prolapsus ani, an irritable and painful state of the sphincter, and an intromission of the upper and undilated portion of the intestine into the lower and dilated part.

The treatment recommended for the simple relaxed rectum is the avoidance of all aperient medicines, and the injection of

a pint of cold water into the bowel every night previous to going to bed; the removal of the prolapsus, and the application of belladonna ointment to the irritable sphincter.

In the case of intromission of the rectum, in addition to the use of the cold-water injection, the exhibition of some mild aperient, taking care that whilst a costive or hardened state of the feces is prevented, purging is avoided; and a course of the Hyd. c. Cretâ with hyoscyamus or conium, or of the iodide and sarsaparilla.

Dr. J. Johnson considered that the first class of cases described in the paper were common enough. The author, in these cases, seemed to deprecate altogether the use of aperient medicine; in this respect he, Dr. J., differed from him. It must be recollected that to effect a cure the colon as well as the rectum must be acted upon, as feces often accumulated above the latter organ. Now the colon would not be reached by the small cold-water injection recommended in the paper, and these injections were far from being always harmless, for they were occasionally productive of great pain and severe tormina. He had even seen them producing faintness in a patient from these causes. In the treatment, then, of these affections, he preferred the milder aperients, such as tartrate of potash, or confection of senna, for these produced no irritation or straining; but were of the most essential service. In cases of relaxed and protruding rectum, he had used Ward's paste with much advantage. Under its employment the folds of the rectum became corrugated, and the canal altogether strengthened. With respect to local mechanical contrivance to keep the weakened bowel in position, he knew of none which in efficacy could be at all compared to two silk handkerchiefs, one of which was placed round the waist, and the other, attached to this behind and in front, kept a soft piece of sponge covered with linen in such a position that it pressed gently on the lower part of the rectum, and kept it in position.

Mr. Bransby Cooper bore testimony to the value of mild aperients in the cases mentioned by Dr. Johnson. In the treatment of prolapsed rectum, however, neither aperients nor mechanical contrivances of any kind were of half the service as the adoption of the plan recommended by Dr. Hunt in his paper—the evacuation of the bowels at night. When this plan was adopted the patient had the advantage of remaining in bed for seven or eight hours, during which time the rectum would be kept in position, and by this means a perfect cure might be effected; a termination rarely to be expected from the use of medicines or of

mechanical support. The rule alluded to was one of great value in all diseases of the rectum. When the bowels were evacuated in the morning, irritation was kept up during the day, either by the sitting posture or by moving about, and all attempts at cure were frustrated.

Mr. Henry Lee stated that it appeared to him that the disease under consideration had hitherto been very imperfectly explained. In dissecting the rectum, a strong band of muscular fibres is found, arising from the posterior part of the pelvis, taking a course downwards and backwards, and encircling the lower extremity of the bowel. These muscular fibres are part of the levator ani, and although not usually described, are very important with regard to the disease in question. They lie in close contact with the sides and posterior part of the bowel, the lower two inches of which are thus encircled by strong muscular fibres, taking the same direction, and performing the same office, as the fibres of the sphincters ani. Whenever it happens that a portion of the relaxed mucous membrane comes within the grasp of these muscular fibres, the very natural effect is, that the return of the blood in the veins in the constricted part is retarded; and this in reality is the cause of the deep-seated dull pain, the tenderness, and the inflammation, which are so frequently observed in these cases. The principal object of local treatment in such instances is to relieve the inflamed portion of mucous membrane from the constriction caused by the muscular fibres, which has just been described. Temporary relief is immediately produced by returning the relaxed and congested mucous membrane to its natural station; but the benefit thus derived continues as long only as it is retained there.

It has been stated that the different instruments which have at various times been used in this complaint, instead of giving relief, have tended to increase the irritation of the part. This appears in a great measure, if not altogether, to depend upon the mode in which these instruments are constructed. They are generally so contrived that the bulb (by means of which the instrument is retained in the bowel) is placed, when the instrument is worn, immediately within the grasp of the muscular fibres of the levator ani, and it is to this cause that the irritation complained of is principally to be attributed. If, however, the stem of the instrument is made sufficiently long, so that the bulb, when introduced, is situated above instead of within the circular fibres of the levator ani, the instrument can be worn not only without inconvenience but often with the greatest comfort. Such instruments are kept by Messrs. Savigny, in St. James's

Street. With regard to the plan proposed of removing portions of the mucous membrane in this disease, Mr. Lee considered the application of the strong nitric acid to the part as a safer and much less painful operation than that which was usually performed by means of a ligature.

Dr. Dickson supported the opinion of Dr. Johnson in regard to the employment of mild medicines, which acted on the bowel above the rectum, in case of obstinate constipation. He had found no remedy more efficacious in these cases than a combination of extract of hyoscyamus, and blue pill, in large doses. This was often of service in cases even of stricture situated high up in the bowel. He mentioned also with commendation a medicine for the knowledge of which he had been indebted to the late Dr. Gooch; it consisted of a mixture of aloes with sulphuric acid. In one instance in particular he had employed this medicine with the utmost advantage. The patient was a lady of constipated habit, who on one occasion had no movement of the bowels for sixteen days. Various gentler means to obtain an evacuation having been employed without effect, the aloes and sulphuric acid were administered; the bowels were quickly relieved, and during the remainder of her life, a period of six years, they were always easily acted upon. She died from diseases altogether independent of constipation. With respect to mechanical support in prolapsed rectum, he spoke with strong approbation of an instrument made by Mr. Lavvdy. The bowel by this apparatus was supported without inconvenience to the patient, and a cure by its means was occasionally completely effected.

Dr. Leonard Stewart related a case in which protrusion of the rectum had existed constantly for eight years, and occasioned much suffering. The patient was seized with apoplexy, for which bleeding and mercury were resorted to. The functions of the bowel were completely restored under the influence of the salivation.

Mr. Macilwain considered that all the speakers, as well as the author, had taken too confined a view of causation in the diseases under discussion. The cause was more frequently in the portal circulation than in the rectum, and remedies applied to that part of the system would be found efficacious. This principle had been acknowledged, though not distinctly mentioned, in the recommendation of remedies whose chief action was on the liver. He spoke of the necessity of caution with respect to purgatives, which he had seen produce mischief in these affections.

At the next meeting papers will be read by William Ferguson, Esq. and Dr. Alison.

PHYSICAL SOCIETY OF GUY'S HOSPITAL.

November 30, 1844.

DR. LEVER in the Chair.

At a very full meeting of this society, Mr. Oldfield, with the sanction of Mr. Key, brought forward the particulars of a case of aneurism of the right subclavian artery, occurring in a young woman, and upon whom an operation had been commenced by Mr. Key, for the purpose of either passing a ligature around the arteria innominata, or of tying both the subclavian and the carotid, near their common origin, as the state of the parts when disclosed by the knife might render most advisable.

Mr. Key was induced to attempt this operation as a last resource for the well-doing of the patient, because no clear indications of aneurismal disease of the arteria innominata or arch of the aorta were discoverable, —an opinion in which the stethoscopic authorities of the hospital coincided, except Dr. Hughes, who pronounced the arteria innominata implicated. After completing the steps of the operation required for reaching the arteria innominata, Mr. Key found it impossible to surround that vessel with a ligature, in consequence of a tumor connected with it; and the attempt was finally abandoned. The operation lasted one hour; and the wound went on so favourably, that it had become nearly filled with granulations at the time of the patient's death, which took place the 23d day after, when she sank with symptoms of pulmonary distress and exhaustion. Mr. Oldfield read a minute account of the symptoms, steps of the operation, and after-treatment; and also exhibited the diseased parts to the society. The tumor, which prevented the completion of the operation as originally intended, was found to consist of an aneurismal enlargement of the upper part of the arteria innominata and origin of the subclavian artery, the carotid artery being comparatively healthy. This enlargement, together with a mass of diseased glands, had pressed on the right bronchus, into which it would probably have opened, had life been prolonged; it had, by its pressure, been the immediate occasion of the fatal termination.

The paper concluded with some judicious remarks on the difficulty of diagnosis in this peculiar and very interesting case, and on the superior applicability of the distal operation in cases of aneurism of the innominata in general, which Mr. Oldfield contended was proved by the recorded cases of success elsewhere, although the distal operation for aneurism had not as yet been regarded in a favourable light at Guy's Hospital.

An animated discussion ensued, in which Drs. Brereton, Chevers, Munk, and Hughes, and Messrs. Callaway, Jun., Lloyd, and France, took part. The stethoscopic diagnosis of internal aneurism, both thoracic and abdominal, with the nature and source of the systolic and diastolic bruits which accompany them, formed the staple of debate, but the propriety of declining operation altogether, and trusting to spontaneous cure by very small and oft-repeated bleedings, was also canvassed. A case of thoracic aneurism in St. Bartholomew's Hospital, where Mr. Paget, with the sanction of Dr. Latham, had employed venesection fifty times, was related by Dr. Brereton to have proved completely successful, as demonstrated when the patient died of concomitant disease of the lung two years after.

The usual thanks were voted to the author, and a communication on the subject of a peculiar disease of the intestine, from Mr. Hiff, announced by the Secretary for the next meeting.

THE ORTHOPÆDIC INSTITUTION.

To the Editor of the Medical Gazette.

SIR,

In last Saturday's *Lancet* appears a letter, signed "A Constant Reader," assuming the Editor to be "of course aware" that in consequence of the "bad management" of the above Charity the following resignations had taken place:—The Right Hon. the Earl of Eldon, the President; the Earl of Arundel and Surrey; Dr. Stromeyer; Amos Swaisland; Frederick Heisch, and Frederick Heisch, Jun. Esqs.—Vice Presidents, and suggesting that it is best known to the Committee why "this fact is kept a secret." The Committee will greatly esteem your kindness if you will insert in your next publication my official contradiction of that statement.

The Earl of Arundel and Surrey, Dr. Stromeyer, and Mr. Amos Swaisland, have not resigned, nor is the latter a Vice President; and though the Earl of Eldon and Messrs. Heisch have, it was not alleged to be on account of bad management by the Committee, nor was it so; but by reason of circumstances not originating with the Committee, and in respect of which they had only a limited power. The retirements which have taken place, and every occurrence connected therewith, and with the general affairs of the Charity, have been laid by the Committee (who never intended to keep them secret) before a full Court of Governors, at which Philip Hanbury, Esq. V.P. presided, and a resolution of approbation and confidence was unanimously voted to the Committee.

I will not occupy your valuable columns further than by expressing a sincere belief that the injury which it must be the object of "A Constant Reader," by his anonymous misstatements to do this very useful Institution, will be averted.

I have the honour to be, sir,

Your obedient servant.

H. GILLET GRIDLEY,

Hon. Sec.

Bloomsbury Square,
Nov. 22, 1844.

MR. TAYLOR ON DR. GUY AND HIS REVIEWER.

To the Editor of the Medical Gazette.

SIR,

As I am in some measure interested in the question at issue between Dr. Guy and the reviewer of his "Principles" in your journal, I beg the insertion of the following remarks.

Your reviewer accuses Dr. Guy of having made a very unfair use of my "Manual of Medical Jurisprudence and Toxicology," not merely in adopting, with some unimportant variations, the plan pursued by me in treating the subject of poisons, but in appropriating, in an abridged form, a large portion of the work. The substance of Dr. Guy's answer to this charge appears to me to be, that he has made no more use of the "Manual" in the composition of his work than any author is entitled to make of the works of others. The analogous views of Dr. Christison and myself on the effect of "habit" on poisons—a point on which no toxicologists of the least experience can possibly differ; and the difference of opinion to which Dr. Guy refers as existing between himself and me "on the mode of operation of poisons"—a subject on which no two writers have ever yet agreed—are quite beside the question. The charge of your reviewer, as I understand it, is one of general plagiarism; to which Dr. Guy pleads "not guilty."

If, as the author whose work is alleged to have been pirated, I may be allowed to express an opinion on the subject, I must declare, with regret, that I consider the statement of your reviewer to be correct, and that, in my opinion, the "Manual of Medical Jurisprudence" has been much more frequently used by Dr. Guy, without reference or acknowledgment, than is either proper or becoming in one writer following another so closely on the same subject. I may be wrong in this opinion, and may have been, perhaps, the more readily induced to adopt it, from the fact of Dr. Guy having already appropriated, in the second part of his "Principles," a large portion of the

"Elements of Medical Jurisprudence," published by me in 1836, and now suppressed. In the *Lancet* for October 19, Dr. Guy has voluntarily made a public apology for the error he then committed; but in reference to the "Manual" he wholly denies the charge; although, so far as I am concerned, I consider myself to be more injured by the manner in which he has treated the "Manual" than by the way in which he dealt with the "Elements."

With respect to this denial, I shall only observe, that Dr. Guy allowed a year to elapse before he discovered, or at least announced, that the plagiarisms from the "Elements" had become "a subject of more than private remark;" and perhaps, after another year, notwithstanding the plea of "not guilty" with which he now "boldly" meets the charge, he may make the same discovery with respect to the use which he has made of the chemical toxicology contained in the "Manual." All that I have to say in the matter is, that if, on a comparison of the two works, the profession, especially those members of it who are acquainted with medico-legal literature, and who have no difficulty in deciding on what belongs to one man and what to another, as readily acquit Dr. Guy of the charge brought against him by your reviewer as he acquits himself, I shall be perfectly satisfied; but until then I cannot avoid entertaining the conviction that his chemical toxicology is substantially abridged from that lately published in my "Manual," with occasional interpolations from Christison and Beck. If Dr. Guy demur to this opinion, and if he believe that an author is incapable of identifying his own property, although its shape and form be in some respects altered, and intermixed with quotations from other works, let the decision rest with the profession. He has put in his plea of "not guilty," and the verdict, according to all the rules of justice, must rest with others, and not with himself.—I am, sir,

Your obedient servant,

ALFRED S. TAYLOR.

Cambridge Place, Regent's Park,
December 3, 1844.

CASE OF MISS MARTINEAU.

To the Editor of the Medical Gazette.

SIR,

IN the notice of Miss Martineau's case, which appeared in the *Medical Gazette* of last week, it is assumed that an erroneous judgment has been formed as to the nature of her complaint, and that her age is different from what it really is.

As the medical adviser of Miss Martineau

during the last five years, I have to request that you and other members of the profession may suspend your judgment till a future period, when I shall probably be able to prove that neither in diagnosis or prognosis (as to the final issue) of her complaint, have I been incorrect.

Of the rationale of her recovery, I forbear at present to speak further.—I remain, sir,

Your obedient servant,

T. M. GREENHOW.

Newcastle, Dec. 4th, 1844.

[We had some further observations on the case, which we of course suspend for the present.—ED. GAZ.]

DR. ABERCROMBIE.

Our profession has lost another of its ornaments. John Abercrombie died suddenly at his house, on the 14th of November, in the sixty-third of his age. Dr. Abercrombie had been in his usual health; he had breakfasted; several patients were waiting, and the carriage was at the door. His servant thinking his master stayed longer than usual, opened the door of the study, and beheld him stretched on the floor on his face, with his arms extended, and quite lifeless. On opening the body, the cause of death was found to have been a partial rupture of the left ventricle of the heart, implicating one of the coronary arteries, and the corresponding vein. The pericardium was full of blood. The rent in the ventricle was about an inch and a half in length, and was situated midway between the base and apex of the heart; it did not extend into the ventricle of the heart itself. The substance of the organ was soft, and loaded with fat. The vessels were ætheromatous.

No man ever lived more respected by a large circle than Dr. Abercrombie. His professional brethren followed him to the grave, and in such numbers that the procession had all the characters of a public funeral. The free church presbytery, and the Colleges of Physicians and Surgeons, walked four deep. "The ceremonial was unostentatious and profoundly solemn."—For other information vide *Cormack's Journal*, Dec.

TO CORRESPONDENTS.

WE must decline inserting anything more on the case of Belany. The medical world has formed its opinion of that case; some learned members of the legal profession have also stated in their Journals what they think of the verdict he obtained, and the public, more especially those of his own neighbourhood, who were best able to judge of his character, have given unequivocal

proofs of what they think of him. Dr. Glover, and Belany's other friends, will do well to let that person's memory fall into the shade.

The Editor of the *MEDICAL GAZETTE* must positively decline becoming umpire betwixt one gentleman and another on any point in dispute between them.

MORTALITY OF THE METROPOLIS.

Deaths from all causes registered in the week ending Saturday, Nov. 23.

ALL CAUSES 914
SPECIFIED CAUSES 914

I.—Zymotic (Epidemic, Endemic, and Contagious) Diseases, 209; among which, of—

Small Pox	40
Measles	24
Scarlatina	60
Whooping Cough	17
Croup	6
Thrush	1
Diarrhoea	7
Dysentery	3
Cholera	0
Influenza	5
Typhus	27

II.—Dropsy, Cancer, and other Diseases of uncertain or variable Seat 93; among which, of—

Inflammation	1
Dropsy	23
Scrofula	6
Cancer	15
Atrophy	12
Debility	18
Sudden Deaths	7

III.—Diseases of the Brain, Spinal Marrow, Nerves, and Senses, 122; among which, of—

Hydrocephalus	19
Apoplexy	25
Paralysis	18
Convulsions	37
Insanity	1
Delirium Tremens	2

IV.—Diseases of the Lungs, and of the other Organs of Respiration, 288; among which, of—

Pneumonia	118
Hydrothorax	5
Asthma	17
Phthisis or Consumption	105
Diseases of the Lungs, &c.	17

V.—Diseases of Heart and Blood-vessels 33

VI.—Diseases of the Stomach, Liver, and other Organs of Digestion, 61; among which, of—

Teething	13
Gastritis	0
Enteritis	19
Tabes	4
Hernia	1
Disease of Stomach, &c.	2
Disease of Liver, &c.	7

VII.—Diseases of the Kidneys, &c. 3

VIII.—Childbirth, Diseases of the Uterus, &c. 16; among which, of—

Childbirth	11
Disease of Uterus	5

IX.—Rheumatism, Diseases of the Bones, Joints, &c. 7

X.—Diseases of Skin, Cellular Tissue, &c. 0

XI.—Old Age 50 |

XII.—Violence, Privation, Cold, and Intemperance 32 |

WILSON & OOLIVY, 57, Skinner Street, London.

THE LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

FRIDAY, DECEMBER 13, 1844.

REPORTS, OF CASES TREATED IN UNIVERSITY COLLEGE HOSPITAL.

By H. FEARNSIDE, M.B.,

[Continued from p. 184.]

Hysteria and "spinal irritation."—Extreme sensibility of the surface of the upper part of the body; much headache, giddiness, &c. Failure of depleting remedies in relieving these symptoms—improvement under the use of tonics.

CAROLINE WHITE, æt. 18, admitted into University College Hospital, under Dr. A. T. Thomson, June 13th, 1843. She is a strong young woman, of sanguine temperament, and florid complexion. She is a native of, and has always resided in London, and generally in open and healthy parts of the town. She has always had an ample supply of the necessaries of life. Her parents are living; her father is strong and healthy, but suffered from rheumatism when young; her mother has always been delicate, and has been the subject of asthma since the age of eight years. The patient has been in service about three years; previously, for an equal length of time, she was occupied as a silver burnisher,—an employment which she relinquished from its involving much confinement. About fifteen months ago she injured her left side, and the back of her neck, by falling down some stairs, and she has since suffered from pain in the side on active exertion, or coughing: before this time she is not aware that she ever had any more serious ailment than a cold.

During a considerable part of the last nine months she has resided in Northumberland Street, and near the water side; she describes the house and situation as being very damp, and states that at particular tides the water penetrates through the ground, so as com-

pletely to inundate the cellars. For the same period her work has been more laborious than she had previously been accustomed to; she had been in the habit of staying up late at night, and rarely or ever went out, except for a short time upon Sunday. After being about a month in this situation, her health began to fail; she lost her strength, suffered from pains in her limbs, and frequent headache and giddiness. These symptoms gradually increased, the symptoms became more localised, and after their persistence for about two months she had a severe attack of rheumatism, which confined her to her bed for five weeks. She resumed her employment before she was completely well again, and in about a month, from some exposure, took cold, and lost her voice for some time. Her health appears never to have been completely re-established after the rheumatic attack; she frequently experienced pains in the limbs,—did not regain her strength and flesh, and had repeatedly slight hysterical paroxysms.

On June 2nd, having previously suffered for some time from a severe cough, she was suddenly seized with difficulty of breathing, which continued for about a quarter of an hour; on this ceasing, she had rigors, succeeded by much heat of skin, and headache, and subsequently by syncope; she had also pains in the limbs, especially in the vicinity of the joints. On the following day the symptoms increased in severity, and the headache was intense; a venesection performed on the ensuing day afforded much relief: since this period she states that every afternoon she has had an attack of rigors of about half an hour's duration, followed by heat of skin, &c.; on further inquiry, however, it appears that these alternations recurred at other times during the day. The headache and pain in the limbs subsequently became very distressing, and have continued so to the present time: a week ago, she had a violent hysterical fit, during which, ac-

cording to her own statement, she was insensible for about three hours.

State upon admission.—The hands and feet are rather cold, but the head and rest of the body are rather above the natural temperature; the face is flushed; there is no swelling or redness about any of the joints, but she complains of much pain in the shoulders and knees. There is excessive sensibility to pressure over the spinous process of the vertebræ as low as the lumbar region: pressure over the dorsal vertebræ causes great and distressing dyspnoea, and a lancinating pain in both arms, but especially in the left one. There is extreme tenderness of the whole scalp, and pressure upon this part, or upon the spinous processes of the upper cervical vertebræ, causes dimness of vision, a sensation and stiffness of weight about the eyeballs, and faintness and heaviness of the head. She has almost constantly giddiness, and severe headache: she frequently has tinnitis aurium, and the sensation of sparks passing before the eyes.

There is great superficial tenderness below the left mamma, (the situation of the part injured by the fall before referred to,) and this exaggerated sensibility exists in a greater or less degree over the whole front of the chest, and over both arms, especially their upper parts, and around the shoulder-joints. She has some cough, and complains of its occasioning pain in the left side; there appears to be slight dulness on percussion over the upper part of the left side of the chest, but the respiratory murmur is generally healthy; number of respirations 26 per minute. The sounds and impulse of the heart are healthy; pulse 96, compressible. The tongue is dry, and covered with a yellow fur in the centre; she is very thirsty, complains of some soreness of throat, and nausea—has no appetite; bowels open; the liver descends about two fingers' breadth below the margin of the ribs; no enlargement of the spleen; urine scanty, high-coloured, and turbid, from the deposition of the lithates. The catamenia were present about a fortnight ago; they appeared first at the age of fourteen years; two years afterwards they were absent for about nine months, but since that time they have appeared with tolerable regularity; sometimes, however, recurring after intervals of three weeks only, or even less. Menstruation is usually painful, and the flow scanty.

Treatment, and subsequent progress of the case.—Under the impression created by the statements of the patient that the most prominent symptoms were of a periodical character, quinine was prescribed, and with this was associated a combination of calomel and colchicum, for the purpose of removing

the relics of the rheumatic attack. After the lapse of a day or two, the true nature of the case being more apparent, these remedies were discontinued, and sixteen ounces of blood were taken from behind the ears by cupping; purgatives were also prescribed. These depleting measures at first appeared highly beneficial; the giddiness, headache, and indistinctness of vision, were diminished; the surface of the upper part of the body no longer manifested that extreme sensibility which had been observed on the patient's admission, and pressure upon the spines of the dorsal vertebræ ceased to occasion in the same marked degree those peculiar effects which have been mentioned in the history of the case. The improvement, however, was but temporary; the headache and the symptoms mentioned returned, and were again relieved by the copious abstraction of blood. The expiration of a few days witnessed their re-establishment in all their original severity; for the third time free cupping almost completely removed them, but, as on former occasions, this promise of the restoration of health proved delusive, and it was judged expedient again to have recourse to the same remedy; a blister was applied to the nape of the neck, and a cold lotion to the forehead; purgatives also were freely administered. But these means afforded only partial relief, and on July 1st, whilst under their full influence, the patient was suddenly seized with throbbing of the temporal arteries, lancinating pain in the eyes and ears, and much headache; these symptoms were succeeded by total loss of vision for about four hours, and a considerably longer period elapsed before she could see with any distinctness; the headache continued, but was relieved by the recumbent posture; her sleep was broken, and disturbed by frightful dreams; the pulse was 80, soft, and rather jerking;—the tongue slightly furred. An entirely opposite plan of treatment was now adopted; the carbonate of iron in the nascent form was prescribed in combination with myrrh, and a pill containing assafoetida and henbane was directed to be taken every night. The good effects of the change were soon apparent in the diminution of the headache, and the increased brightness of the eyes, and the vivacity of the countenance; but on July 4th, or three days after the commencement of this altered plan of treatment, the patient left the hospital.

Remarks.—As mentioned above, the statements of the patient upon her admission into the hospital gave rise to the impression that there was something of a periodic character in the affection under which she was suffering. She asserted that for some time she had had an attack of rigors daily at three o'clock, P.M.; so that although the

period of the accession was not exactly that seen in tertian ague, still it was sufficiently near it, to lead upon a first view to the supposition that the case was one of double tertian.

Upon more minute investigation, however, it appeared that the attacks of rigors were not confined to the time mentioned; and, also, that although succeeded by reaction, still there was not generally such increase in the perspiration;—thus altering the aspect of the case completely.

Upon her admission the patient was suffering under the remains of a slight attack of rheumatism, there being some pain about the shoulders, knees, and hips; this, however, soon disappeared. The more prominent symptoms were clearly those of hysteria, and aggravated spinal irritation. The appearance of the patient, the distinct hysterical fit which she had a few days previously, and her history, from which it appeared that she had suffered from the affection repeatedly before, were sufficient to point this out as her true complaint. But there was also spinal tenderness, (to use a conventional expression,) of unusual extent and development; the pathological condition of which this is the index affecting the greater part of the spinal cord. As connected with this state, we may enumerate the excessive tenderness of the scalp, and the headache, giddiness, indistinctness of vision, sense of weight, and heaviness over the eyes, occasioned by pressure over the cervical portion of the spine. The excessive sensibility of the surface of the chest, arms, &c., and the dyspnoea occasioned by pressure upon the dorsal spines, would appear to stand in the same relation to the nervous centre in that portion of the vertebral column. But the cerebrum itself was also implicated, as was manifested by the headache, giddiness, tinnitus aurium, disordered vision, and disturbed sleep, of which the patient complained at the time of her admission, or subsequently.

The true nature of this affection would seem to consist in irregular distribution of blood through the nervous centres generally, and spinal cord in particular. This view is supported by a consideration of the circumstances under which it is most usually developed, as well as by the effects of treatment. In young females it is usually seen in connection with irregular or scanty menstruation—the influence of which periodical discharge upon the circulation is well known. But in addition, there appears to be required a peculiar condition of the nervous structures themselves, either congenital, or the result of a peculiar mode of life,—causes long operating, and tending to deteriorate the general health, and induce excessive nervous sensibility;—hence, from the greater

mobility of the nervous system in females, most of the cases of this affection occur in this sex. The same state would appear to be more rapidly produced by a blow or fall, especially upon the back.

In subjects who possess this faulty organization, whether congenital or acquired, a peculiar state of the nervous centres is readily induced, characterised in particular by undue development of the functions of the nerves, arising from the posterior division of the spinal cord;—hence the great sensibility of the parts to which these nervous fibrils are distributed, and hence the tenderness upon pressure over the spine, from the cutaneous branches of the posterior division of these nerves ramifying in the integuments near the vertebral column. In some instances, the anterior portion of the spinal cord, and the motor properties of the nerves thence arising, are affected, as was seen in this case, in some degree; pressure over the upper dorsal spines occasioning (by reflected irritation) severe paroxysms of dyspnoea.

The causes of the rheumatism in this case appear to have been continued exposure to damps, cold, &c.; and as we have had occasion to observe in other instances, the disease was rather due to agencies which had long been in operation, than to any single exposure.

As regards the spinal irritation, it appears probable that the fall upon the back which the patient had sustained, was one link in the chain of causation. But, as before remarked, it is in particular states of the system that the influence of such accidents is most perceptible. A similar observation will apply to the development of hysteria. In the present case, these affections supervened only after the patient had undergone the debilitating treatment required for subduing a tedious and painful disease, after long-continued confinement in-doors, and late hours; all,—causes highly conducive to the production of that state of the nervous system before adverted to, and which appears to be the essential element in their nature. As is generally observed in examples of these affections, they were associated with a disordered state of the menstrual function; small as is the actual amount of fluid thrown off by this channel, its due elimination has much influence in maintaining a healthy state of the female habit.

The effects of the treatment adopted in this case may give rise to one or two useful observations. The patient was a robust-looking young woman, with a very florid complexion, and her appearance and complaints not unnaturally led to the adoption of free depleting measures. With what success, the history of the case has sufficiently disclosed; the relief afforded by

the abstraction of blood, although considerable for the time, was of short duration, and became shorter after each successive cupping. Notwithstanding her apparent plethora, it must be remembered that for a considerable time her health had been below *par*,—also that she had undergone venesection, and other depleting treatment, before her admission into the hospital. Hence the importance of judging of the state of a patient, not by some absolute and arbitrary standard, but by a reference to his or her habitual condition. The antiphlogistic regimen, in this case, perpetuated the evils which it was intended to remove. As from the absence of the influence of atmospheric pressure, the contents of the cranium remain a fixed quantity, after large depletion the circulation is no longer in harmony with that of the system at large; nay more, from the feeble action of the heart in such cases the blood would seem to accumulate, and possibly even stagnate, in the venous sinuses. Now, although cupping may act as a powerful local derivant for the time, yet as the vessels are rapidly distended again, the continuance of the affection is rather favoured than otherwise. Such were the views which led on July 1st to an entire change of treatment, and even in the short time during which it was tried unequivocal benefit resulted from it. A continuance of the treatment then enjoined, with liberal diet, including an allowance of malt liquor, and out-door exercise, would probably soon restore the patient to her wonted health.

ON FRACTURES OF THE FEMUR.

By W. LYON, Esq.

Lecturer on Surgery, and lately one of the Surgeons of the Glasgow Royal Infirmary.

(For the *Medical Gazette*.)

As stated by me in my paper "On the Statistics of Fractures,"* I treated in all forty-one cases of fractures of the femur, thirty-five of which were in the male, and only the comparatively small number of six in the female. I tried several modes of treatment, and as the number of cases was, I think, sufficient for enabling me to judge of the merits of the plans employed, I shall detail a few of the more interesting examples, and give the inferences supplied by my opportunities for observation. With few exceptions, where the semi-flexed method was demanded by peculiar circumstances, in all the cases the

patients were treated with the limb in the straight position. Into the theoretical reasons for the preference given by some to the extended, and by others to the flexed method, it is not my intention to enter: in public and private I have in different cases frequently used both plans, and do not doubt but that, by careful management, good cures may be accomplished by either of them, a good deal depending upon the skill and care of the surgeon, as well as the particular position or apparatus employed. For the case of the patient, (for obtaining a cure without deformity, or shortening,) the observation of the treatment in the straight position entitles me to assert, that if any method can answer as well, none is superior; and that for facility of application, and ease in after management, as far as both patient and surgeon are concerned, no plan has stronger recommendations. There are, however, important differences in the modes of carrying out the principles on which the plan by extension is based, and it is to these I have more especially to direct attention.

When I entered on my duty at the hospital, I adhered to the mode of treatment previously in use, which consisted in the application of a few turns of a common roller over the foot and ankle, a Scultetus over the leg and thigh, a splint cloth, long enough to extend from hip to foot, three bran pillows, one for the outside from middle of trunk to leg and foot, one for inside, from perineum to beyond sole, and the third in front, from groin to knee, and corresponding to these three thin wooden splints. While the limb was kept extended, and coaptation effected, the bandages were applied, and the splints, folded in the margins of the splint cloth, were laid along the limb, and kept firmly in their places by three or four straps buckled at different points; and the external one was in addition bound firmly to the trunk or pelvis.

In this manner the limb and trunk were retained in a straight line, and the prominences and depressions on the limb, moulding for themselves corresponding pits and eminences on the bran pillows, and these again firmly pressed on all sides by the splints, acted on by the straps and buckles, an accurately fitting soft case was formed,

* London and Edinburgh Journal, Jan. 1844.

and displacement of the fragments prevented.

About one-third of our patients were treated in this manner, and were discharged without perceptible deformity. But to be effective, the apparatus required to be kept very firmly applied: however well put on, the bandages and straps soon become loose, necessitating frequent adjustment; while on the other hand, if tight, they occasioned much restlessness, and not unfrequently pain was complained of over the more prominent parts, especially the inner condyle of the femur, and in two instances such consequences occurred as caused the discontinuance of this method of treatment.

W. A., aged 12 years, June 19th, 1841. To-day he suffered an oblique fracture of femur: there is shortening to extent of one and a half inch, and toes are much everted. The fracture was put up by method above described, and union had taken place, but not firmly, when he complained of pain over inside of knee, which persisting for a day or two, the apparatus was removed, when there was found, over internal part of articulation, an unhealthy looking sore, about the size of a shilling. Retentive measures were omitted, emollients applied, but these were enlarged, and became deeper. The pain increased, and was attended by redness and swelling, and from the glairy nature of the discharge*, and the use of the probe, it became evident the ulceration had extended, and opened the articulation. High constitutional disturbance took place, soon followed by hectic and diarrhœa: these were not checked by a variety of treatment employed: he was daily becoming worse: the danger appeared imminent, and after repeated consultations at intervals of several days, assent was at last given to remove the limb, which was done by lateral flap method, in the lower third of the thigh. He now rapidly improved, and was soon discharged.

Every kind of treatment I could think of was tried to obviate the effects of the opening into the articulation, and amputation was delayed as long as was consistent with safety; indeed, fully longer; the debility, hectic, and diarrhœa which were present, shewing the powerful influence of the local dis-

ease, which in these circumstances often induces such secondary affections as oblige us to postpone, altogether prevent, or persist after the performance of the operation, and destroy the patient. So far as my observation in private and hospital practice has extended, it is rare indeed, but particularly in the vitiated air of an hospital, to see a patient escape without loss of limb, who has had a *large previously healthy articulation suddenly and extensively* opened in any manner, but more particularly by ulceration, where immediate union of the wound is next to impossible: in these cases, the patients have generally either lost their limbs or their lives, and sometimes both: and it ought to be recollected, that in such conditions the attempt to save the limb is one of great danger, and the question is not, whether some have been saved without amputation, for of that there is no doubt, but whether out of a given number, if all were subjected to primary amputation, a larger proportion would not recover than by pertinacious attempts to save the seemingly favourable cases. From this manner of procedure, some limbs would be unnecessarily sacrificed, but lives would be saved otherwise lost in the attempt to preserve members, and while I do not urge the indiscriminate performance of amputation in all cases of this kind, I feel pretty confident of the correctness of the opinion above given; viz., that a greater number of lives would be preserved, by immediate amputation, say in a given number of instances, where the knee, shoulder, or limb, has been freely opened, than by what is quaintly, but unjustly, called conservative surgery. For it is a great, and often fatal mistake, to suppose that in an instance of the assumed kind, we may *safely* try to save, and if unfavourable symptoms shew themselves, we can retrace our steps, and operate. During the trial, such complications as phlebitis, ulceration of intestinal mucous membrane, pneumonia, pleuritis, or the like, very often arise,) the cause still existing) defy all treatment, prevent us from operating, or kill the patient after the operation has been performed. These points deserve consideration in balancing the risks before we determine the procedure we intend to follow in these dangerous circum-

* I am perfectly aware of the impropriety of trusting much to this sign.

stances: the age of the patient, his constitution, the locality in which he is to be treated, the size of the injured articulation, the kind and degree of the lesion it has suffered, ought all to form elements in our decision. Youth is more favourable than adult or advanced age: intemperance unfits for bearing up against such injuries: recovery is much more probable in private than hospital practice: the danger increases proportionately as the size of the articulation augments; and according to the extent, and simple or complicated nature of the wound. All these must be weighed, and in addition the risks from the operation required, which, if primary amputation in the thigh in an adult or aged subject, is an injury not much less mortal, we fear, than the opened knee, the effects of which it is intended to avert.

This was a very serious termination to a simple fracture of the femur, and that in a young subject too. It may be urged, that the issue here was not justly referrible to the mode of extension employed, but arose from the improper or unduly firm application of the apparatus, and that the boy previous to the formation of the ulcer must have complained of much uneasiness, attention to which would have prevented a serious result. I believe greater firmness of the apparatus was not employed than was absolutely requisite for keeping the *very obliquely* fractured fragments adjusted: our patient was of such fretful disposition as effectually guarded him against our neglect, and I detail the case principally with a view to shew that, *without much pain*, the constant equable pressure over the soft tissues covering the prominent internal condyle, may, by directly destroying their vitality, or indirectly, by inducing inflammation and ulceration, occasion the dangerous lesion of an opened knee-joint: and that therefore, if the plan of treatment described is to be followed, the knee should be frequently and carefully examined; a practice, however, both inconvenient and injurious.

Soon after this occurrence, a patient under treatment for a similar injury complained of continued slight uneasiness over the knee, and that not being abated by making a depression in the bran pillow with the finger, at the uneasy part, a procedure often requisite

in this method, the apparatus was removed. The parts over the internal condyle were found red and tender, the whole articulation seemed slightly inflamed, and the excitement did not subside until leeches and cold lotion had been repeatedly employed. Had we not been warned by the serious result in our former case, there is no saying how far the injury might have proceeded here, as the uneasiness was not so considerable as otherwise to have attracted attention.

These occurrences, the fretfulness of the patients, from pressure at some point or other, the necessity for frequent adjustment, and of almost daily comparison of the length of the two limbs, lest shortening existed, finally prevailed on me to give a trial to the method of Desault.

It has been theoretically objected to this plan, that by its use the normal curvature of the femur is destroyed, and that the state of extension in which the muscles are kept excites them to constant and violent action. Of the first objection, I have, in the thirty patients treated by this method, seen no proofs: the length, the activity, power, and countour of the member, being in all the patients unimpaired.

As to the contraction excited by the extension, if it exists at all, it is very soon overcome; the muscles, relieved from the pricking by the extremities of the fragments, soon become passive, and a slight degree of force is sufficient to resist their action.

The correctness of the principles on which this method is based was established to our satisfaction by the success which followed its employment, and this was corroborated by the exemption, with a single trivial exception, from the least injury, of any of the patients treated by it, and also by the comfort they obtained after and while it was applied. They almost universally expressed themselves as feeling perfectly easy: indeed, I cannot conceive it possible for persons with such kind of injuries to suffer less than our patients did. But correct as the principles of the treatment are, I doubt not that the ease the patients experienced, their cure without deformity, and another great recommendation of this method, both for the surgeon and patient, the avoidance of any necessity

for interference or adjustment worth mentioning after the first application, were attributable in a great degree to the attention, skill, and dexterity of Dr. William Findlay, who acted as my clerk for the eighteen months during which I used Desault's plan. The putting up of fractures in the hospital devolves almost entirely upon the gentlemen who act as clerks to the attendant surgeons; and among the many other great advantages which a clerkship confers, in practice of medicine, pathology, practical surgery, and indeed every branch of the profession, are the almost daily opportunities they possess of managing cases of fracture, by which many of them acquire a degree of proficiency as relates to facility, neatness, effective and quick application of bandages, splints, &c., which the generality of practitioners have no field for obtaining, and therefore never arrive at, and which gives the fortunate possessor a great superiority in after life.

Comparing the limited extent of parts on which the extending and counter-extending forces bear in this method of Desault, and the large surfaces on which they act in the other plan I used, it may excite surprise there was not more pain in the former than the latter, and also that no inflammation of the parts pressed upon, or ulceration, or sloughing, should have occurred. In the one case the strong and constant pressure probably comes to tell principally on the prominent internal condyle, thinly covered by irritable soft parts; in the other, traction by the bandage at the foot is, or *should be*, diffused over the entire leg: and the perineum is, comparatively to the knee, so thickly covered with soft parts, while the band can be occasionally slightly shifted by the patient, that with one exception more than the most trivial fretting of the skin did not occur, and that exception entirely arose from the bandaging of an inexperienced substitute, who acted in the absence of the ordinary clerk.

It is less my wish to give elementary descriptions of the apparatus, and the method of application, than the practical points deducible from its adoption; it essentially consisted of Desault's plan, modified as described in the excellent Practical Surgery of Mr. Liston. A splint, with notches at the

extremities, three or four inches broad, of length sufficient to extend from nipple to ten or twelve inches beyond the foot, and of a bran pillow, of nearly corresponding breadth and length: there was likewise a perineal band stuffed loosely with fine carded cotton to about the thickness of the wrist, and to prevent it being soiled or wetted, covered with fine oil silk; a strong cotton roller, five or six yards in length, completed the apparatus. The pelvis being fixed by one assistant, another made gentle fatiguing extension from the foot, when a turn of the roller was applied below the knee, and carried with the greatest possible equality down over the leg and foot; from the dorsum of the foot, it was conveyed eight or ten inches beyond the sole, passed round the notch in the extremity of the splint, then again to the foot and leg, as far as the knee. In this manner the pressure and traction by each end of the bandage was so equally diffused over the entire surface of the leg, that uneasiness was seldom complained of, and the irregular form of the limb at the calf and ankle prevented the bandage from slipping. This method of applying the bandage for extension was found much easier for the patient, less liable to be displaced, and less apt to cause irritation over the instep or malleoli, than the padded band sometimes used; and answered all these purposes better when laid down without the accompaniment of compresses of cotton, which in place of defending the parts from pressure, were found to concentrate it so as almost invariably to cause pain, as a consequence restlessness, and had they been continued, the production of ulceration. I have lately seen used by one of the clerks of the hospital another plan for making the extension from the leg, which is well fitted to prevent any uneasiness, or at least to reduce it to its minimum, and which is at the same time very effective for the purpose. This is essentially the method adopted for obtaining a fixed point on the limb, from which to make extension in the reduction of dislocations. A stripe of strong cotton cloth, about three yards long, is prepared. The two ends of this are laid one on each side of the leg and thigh, the middle hanging sufficiently far from the sole to be hooked on the notch at the lower

end of the splint. The ends are then kept applied to the sides of the leg, by surrounding them and the member with a roller from toes to the knee; the remaining ends of the cotton cloth are now carried down outside of the roller, over the same course as occupied by the two other portions, and the roller, or better, a Scultetus, being again made to surround the limb, and the two side pieces, they are held sufficiently firm for the required degree of extension, while the pressure is so equally diffused that uneasiness and ulceration are entirely avoided. The splint, with the pillow on it, was now laid along the external aspect of the limb; the limb sufficiently extended, and coaptation of the fracture effected: the band carried under the perineum; its ends passed through the apertures or notch, and secured; and lastly, the splint was secured to the limb and body of the patient by bandage, so that the limb and trunk were kept in a straight line, and the extending forces acting in the same direction, displacement was effectually prevented.

In using this plan it is especially requisite to prevent the patient from carrying, (which he is much disposed to do) his trunk away from the splint, in order to relieve the uneasiness of constantly lying on his back. When this point is neglected, the trunk being carried inwards from the upper part of the splint, draws the superior part of the femur along with it; the upper fragment consequently stands at an angle with the upper extremity of the lower, and an external curvature is thus formed, shortening the limb, impairing its strength and activity, and of course occasioning deformity.

I have seen several much deformed limbs from this cause, which resisted all attempts to make them straight; a result which the supposed softness of the callus was expected to have permitted to be of easy accomplishment.

It is requisite to institute occasional examination for ascertaining whether the proper length of the limb in which the fracture is situated, be maintained. I have seen several modes tried for effecting this seemingly simple and easy matter; but I believe all the plans are inferior to comparing the length of the injured with that of the sound limb, while the one is laid along side the other, and while means are taken to

place the superior spinous processes of the pelvis perfectly transverse to a line falling through the centre of the body and between the limbs. If accuracy as to the direction of the limbs to the pelvis be not observed, I have ascertained by measurements on the skeleton that very erroneous conclusions may be arrived at.

Such was the mode in which we managed our simple cases, and after its adoption, as the more important points, our patients experienced greatly less discomfort, and as a whole, from the less motion to which they were subjected, had their fractures united in a shorter time than by the other method. Another not slight recommendation of Desault's plan was the ease with which it was managed by the attendant, compared to the other. In many instances, partly, in all probability, from the transverse direction of the fracture, any interference was not required after the first application: in none was more needed than an increase of the extension if upon measurement of the limbs any shortening was observed: whereas, when the other practice described was followed, almost daily taking down, renewed extension, and a troublesome, tedious re-adjustment, were required.

General or local medicinal applications were rarely required. The trivial excitement usually following reception of the fracture, commonly subsided in a few days under restricted diet, and the perfect quietude application of the apparatus ensured. Afterwards, full diet, and if circumstances dictated, porter, &c. were allowed, in the conviction that osseous reparation would be hastened and perfected sooner in a condition of system short of plethoric, and consequent risk of functional derangements, than when the patients were in a state of emaciation and debility.

Though having the advantages of substantial fare, still, from the want of exercise, and it may be also from respiring an atmosphere deprived of its due constituents by the crowded inmates of the wards, and contaminated by the emanations from burns, wounds, &c. the patients were almost universally pale, emaciated, and weak, at the expiration of their confinement. Such condition shewed the prejudicial effect of the confinement on the sanguiferous, muscular, and cuticular systems, and it

is not probable it was more favourable on the osseous: so that, to have restricted the diet would not only have protracted re-union, but have unfitted the patients for a longer time from being able to resume their employments.

As noted in the "Statistics," the cases of fractured femur were, one with another, seven weeks in the hospital. Even after the lapse of that time perfect use of the limb was far from being restored, and the following case, of which I have seen several examples, shews that osseous union was not near completion at the ordinary period of dismissal; points out the propriety of great care on the part of the patient; and that he should be admonished not to throw the weight of the body on the injured limb, lest the yet soft callus should yield, and shortening or curvature occur, for which, however unjustly, the surgeon would be held responsible.

CASE II.—R. S. was admitted in June 1841, for fracture of the femur two and a half inches above the knee: he was treated by the method with the three splints, and was discharged at the end of seven weeks. In a few days after, from one of his crutches sliding, he fell, re-fractured the femur at the former seat of injury, and was readmitted. He did not again leave the hospital until eight weeks had elapsed, shewing, what from *a priori* reasoning might have been questioned, that the period required for union was not under such circumstances in the least abbreviated.

CASE III.—*Fracture of femur accompanied by great swelling from extravasated blood.*

C. D., æt. 19, admitted May 1841. A horse on which he was riding, reared, and fell backwards upon the left thigh of the patient, fracturing the bone at the junction of the lower with middle third. The limb was four inches more in circumference than its fellow; the swelling extended from below knee to anterior superior spinous process, was said to have come on instantly after the accident; caused great and disagreeable tension, and was accompanied with lividity. The swelling prevented arterial pulsation from being felt, excepting behind inner ankle, where it was very feeble. The sudden occurrence of the

enlargement, and the discolouration, excited fear lest rupture of the main artery by the heavy pressure of the animal, or puncture of it by one of the extremities of the bone, had occurred, a circumstance of which Sir A. Cooper details a case, and of which I also had a fatal instance a few years since, which was witnessed by my friend, Mr. Thomas Gray. The limb remaining warm, discountenanced our first impression, and to facilitate gravitation, whether of serum or blood, and thus reduction of the size, the limb was placed easily on a double-inclined plane, covered with fomentations, and a purgative exhibited; as the pulse had re-acted, frequent doses of solution of antimony were given, and 15 leeches applied. The swelling in a few days began to subside; the aid of gentle pressure was called in: in a short time after Desault's apparatus was put on, and at the end of seventeen weeks the patient was discharged cured.

The sudden occurrence of the swelling, and the discolouration here, assure us that the symptoms were occasioned by extravasation, probably yielded from a vessel or vessels of considerable size, but whether from the main artery or not must remain uncertain, though from the recovery the affirmative is very unlikely. The tension was at one time exceedingly urgent, and excited so much discomfort to the patient, and anxiety to us, lest it should occasion interruption to the circulation, that we had some intention to incise. Averse, however, to run the hazard of converting the cavity containing the blood into a large and probably inflamed abscess, the member was elevated as described, when the extravasated blood gravitating to the lowest part, where it shewed itself by increased lividity, the symptoms speedily disappeared.

In this case union was long in being effected, and the patient was in the house for the long period of seventeen weeks. Stiffness and induration of the member existed for a considerable time, and the protracted confinement and those conditions were referred to the presence of blood between and around the fracture, and in the intermuscular fasciæ. In my case alluded to, where the femoral artery was punctured by the pointed extremity of one of the fragments, the patient was an elderly man.

From intoxication at the time of the accident, or as a consequence of the punctured artery, he was excessively restless, tossing the limb in all directions. Lividity soon supervened. An incision carried through the fascia was made in front of the thigh, exposed large coagula, but did not afford relief. The member soon became cold, pulsation in the posterior tibial could not be felt, and the patient died. Dissection exposed the artery punctured in its middle third, surrounded with large coagula, the muscles from groin to knee separated by blood, and the fragments so pointed and sharp that the fingers could with difficulty be placed in the cavity without risk of puncture or laceration. If the above condition could be easily ascertained, it becomes an important question how it should be treated. To expose the artery at the punctured part, insulated from its connections, and surrounded by large coagula, with the collateral vessels compressed by the blood driven among the muscles, and in addition to convert the case into one of compound fracture, would hold out little chance of success: to secure the artery above the supposed point of injury might not prevent escape of blood at the puncture, and great as the danger is from primary amputation in the thigh, such operation would, I think, be the least of the two evils between which we would have to choose. It is a most improbable supposition that in such circumstances the cavity in which the blood will be found shall become defined, the circulation in the limb continue, and a traumatic aneurism be formed, surrounding or communicating with the fracture; and that the case will advance so far favourably as to permit the ligature of the vessel as in the usual manner for aneurism. Still, no interference which can compromise retention of the limb will be justifiable until unquestionable signs of death of the member have shewn themselves.

It is unnecessary to dwell upon the occurrence of such cases, as shewing the danger of much motion in the conveyance of patients with fractures, and especially those of the femur at the junction of the middle and lower thirds, or of rude examination and change of position of the injured member, as thereby the comparatively thin layer of muscle or tendon between the bone and the vessel at that part may be

lacerated by the end of a sharp fragment, and the artery be punctured, as happened in the case detailed. The brittleness of the bones, and the consequent greater sharpness of the fragments in the aged, render them more likely to be the subjects of this dangerous complication, while they are the most unfit to bear up against their effects.

[To be continued.]

ON TUMORS OF CICATRICES.

By JOHN MACPHERSON,
Civil Assistant-Surgeon, Howrah.

(For the Medical Gazette.)

VERRUCOUS tumors of cicatrices are by no means rare among the natives of Bengal. They usually occur in the cicatrices of extensive burns, or in those left by the application of the actual cautery over the spleen, a practice almost universally pursued by natives in the treatment of enlargements of that organ. They are also sometimes found in the cicatrices caused by severe flogging. These tumors appear to have much the same character here as in Europe; they are only locally malignant; do not affect the general health for many years—not, indeed, until extensive ulceration is set up; and even then the bones or deeper-seated parts are rarely contaminated, according to my experience. The following stages of these tumors are distinctly observable:—

1st stage. One or more simple elevations of the cicatrix, or of part of it, quite soft, and a little smoother than the rest of the cicatrix. In this stage there is no pain, and the disease may never advance beyond it.

2d stage. Hardening and swelling of these elevations, forming one or two detached warts, perfectly smooth externally, and cartilaginous within: “when their section shews a firm hard structure, of a dense white colour, rising in a fibrous manner perpendicularly from the surface of the cutis.”* The tumors now generally begin to get painful, and advance gradually to the—

3d stage. When the tumors become a little depressed in their centres, become softer, more vascular and pain-

* Caesar Hawkins' Lectures on Tumors, MED. GAZETTE, vol. XXI, p. 994.

ful, and shew a tendency to run into each other.

4th stage. The tumors begin to ulcerate and spread at their edges, and bear all the usual characters of scirrhus.

The foregoing division into stages is of course to a certain degree arbitrary, and only meant to be descriptive of about a dozen cases which have come under my notice. Patients never apply for relief before the end of the second, or beginning of the third stage; in either of these stages excision appears to offer a certain cure, and is far more satisfactory than the application of corrosives. The following cases are chiefly illustrative of these two stages.

CASE I.—A convict complained of three small tumors over his right scapula, which he attributed to a flogging received seven or eight years before. They were oval, smooth, and hard to the touch, about the size of crown-pieces. They were slightly flattened at the top, and had begun to be so painful as to interrupt his sleep. They were excised; and the skin round, and the cellular tissue beneath them being quite healthy, the wound healed readily. When cut into the tumors were white, bloodless, and devoid of vascularity; they were hard, fibrous, and displayed all the usual characters of scirrhus in its early stage. Another convict had similar tumors from a similar cause, but in a less advanced stage, and not painful.

CASE II.—An old woman presented herself with a warty tumor about four inches long, in the cicatrix of an old burn, on her left fore-arm. It consisted of three flattened tumors, which had run into one another, and were advancing towards ulceration, one or two points near the surface having become vascular. As it was exceedingly painful, she had it excised at once—now fourteen months ago. The wound healed well, and she has not returned. The tumors in this case resembled those in the last, but shewed more tendency to vascularity.

CASE III.—A man shewed himself with an immense cicatrix of a burn, extending in front from the shoulder to the wrist of the left arm. At the bend of the elbow there was a very large, raised ulcer, about six inches long and four broad, with a profuse sanious discharge. Even in this advanced stage

the surrounding parts seemed quite healthy, and it was proposed to excise the cancer, and save the amputation of the arm. The patient, however, would not submit to any operation, and went away without having any thing done.

CASE IV. was a large, broad, raised ulcer, in a man of 70, just over the right mamma, about 2½ inches long, and 2 broad. It exactly resembled the cancers of cicatrices which I had met with, but no history of any former cicatrix could be made out. Various escharotics were applied with temporary relief; but as the cancer was spreading, and the neighbouring skin was perfectly healthy, it was thought best to remove it with the knife, which was accordingly done, and followed by a complete cure. In this, as in all the cases I have met with, the cellular tissue beneath the tumor was perfectly healthy.

CASE OF COPPER-COLOURED SYPHILITIC ERUPTION AFFECTING THE CONJUNCTIVA.

BY ALFRED SMEE, F.R.S.

(*For the London Medical Gazette.*)

As far as I know, there is no record of specific eruptions attacking the conjunctiva, but an instance having recently occurred at the Central London Ophthalmic Hospital, it becomes my duty to record it.

The subject of the affection was a respectable married female, the wife of a traveller, who applied at the Charity to be relieved of a small ulcer which existed at the edge of the eyelid. From its appearance I immediately recognised its specific character, and upon inquiry, I learnt that both husband and wife had laboured under syphilis for a period of two or three years. At that time I put her upon the general antimonial treatment, described in the MEDICAL GAZETTE, and the ulceration speedily healed. At this period there were also numerous copper-coloured spots over the skin, which I supposed she thought of but little consequence, as I lost sight of her as soon as the ulceration had healed.

After a short interval she returned again, and stated that her eye was somewhat uneasy, and that she feared

a return of the malady: on examination the conjunctiva below the cornea presented a spot a little smaller than a silver penny-piece. This spot appeared formed by the conjunctiva itself at that point being swollen; in fact, the surface was obviously raised, and the colour changed to that of a cupreous hue, somewhat similar to the colour of the spots of the skin, but considerably lighter: this spot was not absolutely opaque, but semi-transparent, and it gave the idea that the conjunctiva at that part was swollen in its substance, and tinged of a copper colour. It presented no unusual vascularity; in fact, I do not know that I should be justified in asserting that there was a single vessel either increased in size or added in number to those existing in the normal state. The copper colour, then, had no immediate reference to the vessels, and was due to the part exhibiting the syphilitic stain; a phenomenon by no means understood.

This eruption must be considered analogous to those of measles, small-pox, and scarlet fever, which commonly attack that membrane; but perhaps it is even more analogous to that of purpura, which often affects the conjunctiva, of which a very beautiful example occurred at this Charity last summer. The spots of the two diseases, although presenting the distinct characters appertaining to each malady, were perfectly analogous; that of one exhibiting deep purple circumscribed spots, that of the other a copper-coloured, circumscribed spot.

I remember to have seen some time since pustules on the conjunctiva, associated with pustules on the skin, which appeared to have their origin in the syphilitic virus, but up to the present time I have never before seen the copper-coloured eruption to affect this membrane.

There is no particular practical importance to be attached to this malady, for it causes very little trouble of itself, and requires no treatment apart from that required by the system generally. In this case the antimonial treatment was employed, but as the progress was not to my mind sufficiently rapid, I tried the iodide of potassium, giving four grains three times a day, under which treatment it declined, and the patient discontinued her attendance.

The occurrence of this eruption is to

me exceedingly interesting, inasmuch as, being the first case of the kind which has been narrated, it opens the door for further investigation. The affection, in this instance, occurred in a case where the poison had run its own course for years, without regular treatment, and therefore the rarity of the affection may be increased by this circumstance of itself being unusual. My motive in recording this case is to direct the profession to its occurrence, in the hope that by a multitude of observations we may ascertain to what extent this disease attacks the conjunctiva.

7, Finsbury Circus,
Nov. 20th, 1844.

NOTICE
OF

THE MEDICAL ORGANIZATION,
STUDIES, &c. IN ITALY.

To the Editor of the Medical Gazette.

SIR,

AT the present juncture, when public attention is so strongly directed towards the proposed alterations in the medical profession, the accompanying notice of the medical organization, studies, &c. in Italy, will be read with interest, and perhaps with advantage. It is chiefly translated from the Italian edition of M. Combé's work, "*Della Medicina in Francia e Italia*;" with notes by Professor De Renzi, and enters more fully into the subject than I have done in my work on the "*Continental Medical Institutions*," which restricts itself more particularly to the practical part of medical science.—I am, sir,

Your obedient servant,

EDWIN LEE.

Upper Southwick Street,
Oct. 16, 1844.

The direction of medical affairs in Italy is more or less under the superintendence of the respective governments. In some instances the various administrative acts relating to the public health emanate directly from the minister; in others, from a commission or magistracy; or from an individual distinguished by his superior attainments and knowledge. Such are, on the one hand, in Piedmont, the supreme and royal direction of public instruction; at Parma, the grand master of the University; at Rome, the holy congregation

of studies, presided over by an arch-chancellor; at Naples, the junta of public instruction, with an archbishop at its head: on the other hand, there is the *protomedicato*, as at Genoa, Turin, Milan, and in Tuscany.

The practice of the healing art is divided in Italy among different kinds of practitioners, which have each a separate office. In the first place there is the physician, who, after belonging five or six years to the faculty of physic, and after serving two years as assistant in the clinical ward of an hospital, obtains the right to practise. Next, is the surgeon, who after four years of studies analogous to those of the physician, and after a certain period of trials and special studies, is considered capable of dedicating himself exclusively to the operative department. Afterwards comes the phlebotomist, who is restricted to the lower department of surgery, and corresponds to the *officier de santé* in France.

In the second order are the apothecaries (*farmacisti*), upon whom are imposed several conditions of guarantee and of capability, including the deposit of a sum of money (about 4000 francs): the midwives, oculists, dentists, and those whose business is restricted to bleeding, the application of leeches, blisters, cupping, &c. The druggists and herbalists form the lowest steps of this medical ladder.

The *protomedicato* constitutes a particular magistracy formed of a medico-chirurgico-pharmaceutical council, presided over by a chief who has the title of protomedico. It is composed of an equal number of physicians, surgeons, and apothecaries, and holds three sessions annually; one of medicine, one of surgery and obstetrics, and one of pharmacy.

The principle of the protomedicate, as organized by a regulation of the King of Piedmont, dated the 16th of March, 1839, rests upon the direct and legal superintendence of all those who practise medicine or surgery, wholly or in part, and the veterinary art; in order that each of the members of the medical corps should restrict himself within the limits of the department of the profession for which he has received a qualification.

The attributes of this body are still more clearly defined by a decree of

Maria Louisa, Duchess of Parma, as follows:—

1st. To decide upon the capabilities of those who seek to be admitted to practise any of the branches of the art of healing; as also to judge of the degree of knowledge of those already possessing a diploma.

2d. To maintain discipline among these latter; to censure, and to punish them when requisite.

3d. To prevent, and to reconcile, the disputes which may arise between physicians, surgeons, &c. regarding the rights of their respective professions.

4th. To obviate grounds of complaint on the part of patients; to approximate to each other the discordant parties; to punish those of the medical body who are guilty of an infraction of the regulations; but solely in those respects of which the ordinary tribunals cannot take cognizance.

5th. To express an opinion with regard to the pretensions and the compensation of physicians, surgeons, apothecaries, and midwives.

6th. Lastly, to watch that each individual exercise his profession in a legitimate manner, and according to the regulations.

Before granting the *exerceat*, the protomedicate requires, in addition to the other certificates, that the physician should give proofs of his competency at the bed-side of three different patients, by examining, and writing the history of three different diseases, indicating their causes, symptoms, progress, diagnosis, and mode of treatment; that the surgeon should perform two operations upon the body—at three different times; and that the apothecary should make up eight preparations, or pharmaceutical compositions.

The preceding account sufficiently shows the difference between the protomedicate of Piedmont and that of Parma; the former is simply a magistracy of police destined to prevent usurpations, and to keep each one in his proper place: the latter is at the same time a directing body, for the more efficient prosecution of studies, and affords a guarantee that the knowledge of members has been attained in the bosom of the faculty.

The merit of having more fully organized the institution in this respect belongs to Professor Tommasini, to

whom is likewise to be attributed the regularisation of an improved system of vaccination. The practitioners whose business it was to propagate vaccination formerly received a certain sum for each child subjected to the operation, and Professor Tommasini thought he perceived, in the lists sent to him in his capacity of president of the protomedicate, that many of the children inoculated did not present the signs of a true vaccination. He consequently established a body of young physicians for the purpose of superintending the vaccinators, who, when the lists were about to be made out, visited the houses where children had been vaccinated, and gave a regular certificate of their actual condition, and of the normal or anormal appearance of the eruption. Hence resulted a greater regularity in the service, the certainty of the reward being granted in proportion to the real service performed, and the advantage of bringing before the public young men of talent, who, after three years, gave place to others who had distinguished themselves, thus keeping up a salutary degree of emulation among them. In no part of the world, perhaps, was the discovery of Jenner received with a greater degree of faith and enthusiasm than in Italy, and the government sought by every means to prevent the ravages of the small-pox, and favour the progress of vaccination. In Milan, for instance, if parents refuse to have their children vaccinated, a *procès verbal* is signed by the vaccinator, the curate of the parish, and the syndic of the district, stating the opposition that has been made, and this is sent to the provincial delegation. Charitable institutions do not grant assistance to those who cannot shew a certificate of having been vaccinated. The curates are obliged to send every three months to the vaccinator of the district a list of the children born and baptized in their parishes; to read from the pulpit every three months the names of those who have died from the small-pox, and at the same time to remind parents of their duties towards God and the Prince, which command them not to omit to avail themselves of so great a benefit as vaccination.

When an individual is attacked by the small-pox, the head of the family, and the physician or surgeon in attendance,

are bound to make an immediate declaration thereof to the municipal authority under a penalty of 100 francs, or a fortnight's imprisonment. The administration causes to be placed over the door of the house, the following inscription in large letters—"The small-pox is in the family of ———— residing in this house." All those who have had communication with the patient are shut up in the same house until a cure or death ensues; the body is carried to the burial-ground without being accompanied by a priest, and is buried without funeral ceremonies in a spot apart.

According to the new regulations issued by command of the King of Naples, all those who have omitted to avail themselves of vaccination are incapacitated from enjoying the sovereign munificence: petitions are not received by the ministers, nor in any charitable institution, unless accompanied by a certificate that the individual has been vaccinated. The administrators of hospitals are bound to cause children to be vaccinated in the month following their admission. Directors of colleges, ecclesiastical, civil, or military, are prohibited from receiving any pupils who have not been vaccinated.

A central Royal Vaccine Institution is established in the capital, composed of ten ordinary members, and two super-added, who have under their orders twelve ordinary vaccinators, and as many extraordinary; as also six *employés* for the correspondence. Each vaccinates gratuitously at his residence daily. Every three months vaccine virus is sent to the provinces, from the minister of the interior, and its receipt in a good state is acknowledged by the provincial vaccinators. The children vaccinated must be brought several times to the vaccinators, in order to ascertain that the effect is produced.

Vaccine commissions exist in the chief town of every province and district; which are bound to act according to the instructions transmitted to them, and to endeavour to diffuse the propagation of vaccination in their respective localities.

All *employés*, and those who live at the expense of government, must have their children vaccinated. The clergy are charged to preach to the people re-

specting the usefulness of vaccination, and the duty which is imposed by God and the King upon each father of a family to preserve by its means from sickness the lives of their children.

The vaccine junta of each district causes midwives to be instructed and convinced of the utility of vaccination, and obliges them to promote its practice as much as possible. The junta meets every month to ascertain that its regulations are obeyed, and in what degree vaccination has prospered or has declined.

These are some of the principal points of the regulation issued in September 1838; and it appears from the statistical returns, that while in France, where vaccination was introduced at an earlier period, out of a population of 32,000,000 individuals, 495,450 children were vaccinated, whereas in that part of the kingdom of the two Sicilies nearest to the rest of Italy, the population of which amounts to 5,720,000 inhabitants, as many as 180,000 are every year subjected to this preservative medium.

M. Combé states, that notwithstanding the bright example furnished by Tommasini in the greater extension of the office of protomedicate, this institution has fallen somewhat into disuse in most parts of Southern Italy. This, however, is denied, with respect to Naples, by Professor de Renzi, in the notes to M. Combé's work. In Lombardy it is now concentrated in one individual, termed Protomedico.

Civil Practice in Lombardy.

The sanitary-administrative organization in the kingdom of Lombardy rests upon a Councillor-Protomedico; then come the physicians of delegation, the district physicians, and the municipal physicians.

The councillor Protomedico is equal in dignity to the other official councillors in Austria, holds his administration in the same Government Palace, has a vote in the central assembly, presided over by the governor and the Aulic councillor, even when other than medical matters are treated off; and once a week he submits to the others the consideration of those matters which relate to the public health. His propositions, like those of his colleagues, are admitted, modified, or rejected, ac-

cording to the majority of votes. The orders issued from the cabinet of the Protomedico, termed the minister of public health, are executed when countersigned by the governor. He presides over all affairs which relate to the economical and sanitary administration of the hospitals; maintains the regulation and the discipline of the studies which refer to the exercise of medicine, surgery, pharmacy, and the veterinary art; watches over the service during the prevalence of epidemic or contagious diseases; regulates the nominations, promotions, rewards, and punishments of the medical body, the proper maintenance of the cemeteries, and, in fact, upon him depend the guarantees for the health and physical well-being of the population.

For the expedition of affairs, the Protomedico has at his disposition a secretary, vice-secretary, veterinary superintendent, and several assistants. He has a salary of from 6500 to near 8000 francs annually, exclusive of other emoluments (which may amount to 1000 francs). The secretary and the vice-secretary are paid like those of the other ministers.

The territory of Lombardy is divided into nine provinces, of which each possesses, in its chief town, a royal delegation, destined to watch over and provide for the interests of the district, and of the dependent communes. Attached to each delegation is a *medico-reale*, who enjoys similar privileges in the province to those of the Protomedico in the capital—being next in rank to the royal delegate, to whose authority he is subordinate, and by whom his orders must be countersigned. Next to the *medico* is the *chirurgo-provinciale*, who possesses the degree of Doctor, but is dependent upon the former: his office is more particularly to supply the place of his superior while he is on his annual tour of inspection of all the public medical establishments, and of all the pharmacies within his district. The *medico-provinciale* has an annual salary of 1500 francs, and receives besides 36 francs for each pharmacy which he visits. The surgeon receives 1000 francs a-year. The assistant has no salary, but the expectation of an appointment, or a lucrative promotion.

The district physician is selected

from among the great number of those who are residing in the subdivisions of each province, termed districts. His office is solely to encourage, and to practise, vaccination in the communes of his district. He is applied to in preference in cases of urgency, of public calamities, or of orders emanating from the supreme authority. He receives an annual recompense. The *medico-chirurgo delegato* is chosen and nominated by the majority of votes of the magistrates of one or more places, subject to the approval of the Royal Provincial Delegation. His business is chiefly the treatment of the poor of the villages or boroughs; but although he is obliged to attend and treat all the poor sick of the communes by which he is paid, he need not refuse his assistance to richer patients when consulted by them; he must inform the Delegation of all the medical cases which present an epidemic character: it is, moreover, his business to inform the authorities of all unqualified persons who may attempt to practise medicine, surgery, or obstetrics. His salary varies according to the extent of the commune, the number of poor and rich inhabitants, the fertility, and consequently the richness, of the country: it may be estimated at from 800 to 2600 francs; to which must be added the profit derived from the treatment of, or operations upon, those patients who are above a state of indigence; these amount, in some localities, to 4000 or 5000 francs, or upwards.

In many places the chirological administration is distinct from the medical; there are then two individuals occupied. In other parts, a public service of obstetrics is annexed, for rendering assistance to poor women in labour. The obstetrical medico-chirological administration is differently organized, according as it applies to the poor of the town or in the country. Of the former, those who cannot be sent to the hospital are visited gratuitously in their houses by practitioners termed *medici della corona reale*, who attend in different parts of the town, and receive a salary from the hospital funds.

The *medico-municipale* exists only in communes of the first class, and his office consists in visiting public women, and houses of prostitution. The tri-

bunals and the theatres have also their physicians, who have to give certificates in cases of disease, to verify the commission of criminal acts, draw up reports, &c.

[To be continued.]

RECORD OF CASES.

By THOMAS MAYO, M.D. F.R.S.

Physician to the Infirmary of St. Marylebone.

[Continued from p. 148.]

Chronic cases, treated with partial or entire success, in which morbid changes of the cerebral or spinal system have existed, or have been threatened.

JULY 13, 1820.—Miss R., a young lady aged 24, of moderate height and embonpoint, well-formed, of a dark complexion, of an even temper and strong intellect, complained of a general sense of oppression, heaviness, tightness, and throbbing of the head; a wearing sensation, with heat at the bottom of the back, amounting sometimes to excessive pain; scanty and high-coloured urine. The catamenia are regular; appetite good; tongue slightly furred. It appeared that these symptoms had been recently aggravated by the use of the chalybeate waters of the place (Tunbridge Wells), which had disagreed with her. The catamenia, though regular, were far from profuse; the latter state, whenever it occurred in the subsequent treatment, always made her worse. The same result followed excessive action of the bowels, which, however, required frequent mild aperients. Walking, and even airing in her carriage, were followed by a sense of weariness and feebleness inconsistent with her age and muscular development. At the right side of the lowest lumbar vertebra I found a space, about the size of a shilling, extremely painful on pressure, which left also a very enduring pain.

Oct. 18th.—The bowels have been kept gently open by Compound Extract of Colocynth and Pil. Hydrarg.; doses of Potassi Acetat. ʒj. e Mist. Camphoræ, ʒj.; Infus. Sennæ, ʒss. occasionally given, and leeches applied to the loins, always, however, with a consequent depression of power, which forbade their frequent use. The patient has been recumbent a large portion of each

day, and taken airings in an easy carriage. There is less uneasiness of head and inability to apply the mind. The urine is increased in quantity; but the wearing sensation at the loins, though lessened, continues with occasional exacerbations, under which it passes down the thigh and leg. The lower limbs have become more powerless; there is a rolling and uncertain movement in the legs, which cross each other involuntarily in walking; and on the occurrence of one deficient period, the paraplegic state greatly increased. There is, however, neither numbness nor rigidity, nor spasmodic action, and the spine itself is perfectly normal.

It now appeared to me expedient to add to recumbency the benefit of some local drain, in relation to these last symptoms. Leeches, as observed, benefitted, but weakened unduly. The peculiar constitution of the patient's mind rendered issues or setons inexpedient. Local examinations and appliances of this kind were likely to complicate the case; for very obstinate constipation and retention of urine had recently ensued on an unavoidable exposure of her person, with reference to the question whether the hip-joint might be in fault. I determined to carry out a course of small blisters, one applied every second day, on or near the painful point on the right side of the lowest lumbar vertebra. When this had continued three weeks, I find in my notes that the power of walking with crutches or sticks had materially increased (I allowed her this exercise for a limited time each day), and the degree of weariness ensuing on exercise had materially diminished. The bowels required mild aperients almost nightly; and it is observed that the patient is always best on those days which succeed the exhibition of some calomel added to the pill.

The blistering system commenced in December, 1820. During the first two or three months of its continuance, whenever the intervals between their application were much lengthened, I found reason to regret this. But on July 16th, 1821, I find it noted that for the last month these intervals had been six or seven days without any recurrence of heat and weight in the lumbar region, which had taken place previously whenever the repetition of

the blister had been thus delayed. This drain, it is to be observed, produces no depression; but the effect of an active aperient continues as depressing as at first described by me. Mineral acids were occasionally given during this time. The following agreed admirably:—

℞ Infus. Cascariæ, ʒiss.; Tr. Cinna-
mom. Co. ʒj.; Syrup. Rheilor. ʒss.;
Acidi Nitrici Muriatci, aa. gtt. ij.

Gradually the blisters were discontinued, and the patient left Tunbridge Wells, at the end of September, free from that local heat and tenderness, as well as pain, and from the paraplegic symptoms, for which they were adopted.

In justice to the above plan, I must observe that the absence of carious disease in the bodies of the vertebræ was presumed; otherwise a deviation from recumbency would not have been permitted by me.

This young lady had been sent to the place where I saw her in reference to its chalybeate waters. The diagnosis, in regard to such treatment at that place, is not easy, where congestive symptoms coexist with feebleness in a nervous temperament. The chalybeate, however, is generally mischievous in such cases, when the secretion of urine is scanty and lateritious.

In the following case a similar procedure to that which succeeded with Miss R proved equally useful.

June 8th, 1823.—I was sent for to Miss Bowra, a farmer's daughter, aged twenty-five, in the neighbourhood of Penshurst, to meet Mr. Douthwaite, of Tunbridge. I learnt that seven years before she had been attacked by severe pains in the head, for which V. S. and other remedies of that class had afforded no relief; but in the course of time they gradually subsided. In the January of the present year these pains had returned with much severity; and entire paraplegia, in regard to voluntary motion, had supervened. These, and the following facts, I find noted by me, viz., a small and languid pulse, continually recurring spasms; intense sensation of heat of head; frequent hysterical sense of suffocation; flatulent distension of stomach after food; extreme emaciation. The plan laid down under those circumstances was as follows:—

Emplast. Lyttæ lumbis quâque septimâ.

R Pil. Hydrarg. gr. iij.; Ext. Colocynth. Co. gr. iij.; Capsici, gr. j.; Rad. Ipecac. gr. ss. o. n.

R Mist. Camphoræ, ʒvss.; Sp. Ammon. foetid. ʒiij. 4ta pars bis quotidie.

I saw this patient once only, but was subsequently informed by Mr. Dowthwaite that repeated applications of blisters to the back, mild mercurials, and adequate aperients, had completely cured her.

The following case, though widely different from the above, falls under the general head which I propose to illustrate.

The Rev. R. S., aged 37, of a pallid countenance, but strong, short figure, consulted me in February, 1838. He complained of inability to walk, or take any exercise, from vertigo and languor; of a fixed pain, and sense of obstruction, in the occiput, and uneasiness and numbness in the loins. His utterance was slow, and very laborious; and I ascertained from his friends that complaints which he also made of growing incapacity for business, were not exaggerated, whatever the cause might be. He was a sensible man, of an even temper. I ascertained that in early youth some evil habits of an enfeebling nature had been indulged in. He was a married man without children, and lived in the country.

Sumat. Pil. Hydrarg. Sub. C. gr. iij.; Pil. Galbano, C. gr. v. o. n.

R Sp. Ammoniacæ Succinat. ʒiss.; Aquæ, ʒvj.; 4ta partem ter quotidie.

R Ext. Co'ocynth. C., Rhei, aa. ʒ; Ext. Hyoscyam. gr. x.; in pil. x. divis. j. vel ij. p. r. n.

This course was pursued, with slight modifications, to the beginning of May, and was attended by the greatest relief of all his symptoms. Successful treatment benefits cases of this kind as much by the hope which it inspires or restores, as by its direct physical effects. No change was made in the general habits of Mr. R., which could explain his cure, independently of the medical measures. I may add, that I have often seen this gentleman since in the enjoyment of good health.

[To be continued.]

MESMERISM APPLIED TO SURGICAL OPERATIONS.

To the Editor of the Medical Gazette.

SIR,

ALTHOUGH in your articles upon the subject, you have expressed an opinion adverse to the pretensions of mesmerism, I suppose you do not intend following the dogmatical and unphilosophical course pursued by a cotemporary, of closing your columns to all discussions respecting it. I shall feel obliged by being allowed to address a few words through them to an important portion of the profession, among whom, I believe, the GAZETTE especially circulates—the hospital surgeons.

There are from 50 to 60 of these gentlemen attached to the metropolitan institutions alone, and I have not heard that even one of so large a number has employed the facilities which the charity with which he is connected may afford, in investigating the claims of mesmerism to the power of rendering persons insensible to suffering during the performance of surgical operations. Is this right? I humbly think that it is not, and that equally whether the alleged fact be true or false. The suffering attendant upon an operation is of so truly a terrible character, that whatsoever seems to offer but the shadow of a hope of even mitigating it, should be seized upon with avidity: and a credulity that engages in the essaying of many appliances to this end, which in the event may prove worthless, is far less to be condemned than unyielding scepticism, which forbids even the bare trial of such as might by possibility prove of service. It seems to me a very strange procedure, at the present day, to condemn that by *à priori* reasoning alone, to which the infallible test of experiment has not been applied.

Statements of the possession of this power by mesmerism have now been long and frequently made, and actual demonstrations have been repeatedly appealed to. The proper answer to these is not an impeachment of the veracity of the narrators, or charging them with collusion—and that in instances where prior respectability, and the absence of motive, alike render it improbable; it consists in the repetition of the experiments upon an en-

larged scale, and under circumstances which would render deceit of any kind impossible. By neglecting to institute such a series of experiments, the hospital surgeons have, to use the mildest terms, shewn a culpable apathy, and a want of a due recognition of the responsibilities of their position in the profession. For, supposing, sooner or later, the fact turns out to be true, as stated—which, to say the least, is not *impossible*—how will the amount of needless suffering inflicted between the period of its enunciation and the adoption of practices consequent upon its recognition, be justified to the mind of a conscientious man? On the other hand, supposing it proves an untruth or a delusion, is it of no importance that the public mind shall become disabused upon so vital a point, and definitively assured that those to whom it has intrusted life and limb have neglected no opportunity of alleviating suffering humanity?

In the very nature of things the experiment must sooner or later be effectually tried; but it seems a far more gracious circumstance that it should spontaneously originate with the profession, than that it should be forced upon us by the pressure of public opinion. The only difference arising from delay will be, that the experiment must be commenced with a different class of persons. The poor hospital patient must submit to things as he finds them; but the wealthy and informed patient will naturally insist that this prospect of an alleviation of suffering during his terrible emergency shall be essayed. Speaking for myself, I can certainly say, that were I unfortunate enough to require the performance of a surgical operation, I should feel most desirous of endeavouring in this way to obviate some of its horrors.

As to what degree of truth may exist in the doctrines of mesmerism, I do not profess to offer any opinion, being, in fact, very ignorant upon the subject. The few experiments I have witnessed have not been of a satisfactory character; and I believe I am as sceptical as most persons as to the ultra-pretensions of the professors of the art. I think much good would have accrued if, long ago, a searching investigation into the whole subject had been undertaken by a body of scientific and unprejudiced men, for the purpose of

deciding which, or whether any, of these pretensions possessed any foundation in fact.

However, this has not much to do with the purport of this letter. I wish in it solely to call attention to the urgent necessity, upon the part of those whose opportunities are so abundant, of instituting the necessary researches as to whether the procedure known as mesmerism does, or does not, possess the power of preventing suffering during surgical operations. *Let the experiment be fairly tried.*

Were our medical corporations constituted such as the wants of society require they should be, appeals of this nature would be uncalled for, or rather would be anticipated. The profession, harmoniously organized, might become a powerful instrument, in its corporate capacity, for the achievement of great benefits regarding all questions of public health; and inquiries which legitimately belong to it would not in future be utterly neglected, or, as in the case of various others, be superintended by Poor-Law Commissioners, whose only qualification for these supernumerary duties consists in their happening to possess so enlightened, benevolent, and indefatigable an individual as Mr. Chadwick for their Secretary.

I would suggest, that a committee of hospital surgeons be appointed for this important investigation; and I have no doubt that their report, if founded upon a patient, deliberate, and candid examination into the whole matter, will prove decisive not only with the profession, but with the public at large.

I am, sir,
Your obedient servant,
JOHN CHATTO.

Great Coram Street,
Nov. 25, 1844.

ANALYSES AND NOTICES OF BOOKS.

—
“L'auteur se tue à allonger ce que le lecteur se tue à abréger.”—D'ALEMBERT.

—
A Complete Course of Meteorology, by L. F. KAEMTZ, with notes by C. MARTINS; translated, with notes and additions, by C. V. WALKER, of the Electrical Society. 12mo. pp. 598. London: Bailliere.

At this season of the year, when the press teems with Almanacks of every

kind, from the carefully calculated "Nautical Almanack," intended to guide our enterprising mariners in their course through the trackless deep, to those of Partridge and Moore,—which are as aptly calculated to mislead those who put their trust in them, as were those in the time of Ben Jonson, who, in *Every Man out of his Humour*, makes a miserly character (Sordido) buy up all the wheat on the faith of their predictions of six weeks bad weather after St. Swithin's day, and then hang himself because the harvest was abundant, and the poor had plenty,—it is gratifying to find a work which seeks to explain the phenomena of the weather by well-ascertained data, and cautious induction. Professor Kaemtz was well prepared for the task he had undertaken, having devoted many years to sedulous observation, and having been long engaged in giving lectures on Meteorology; the present work being a summary of his Course, first at Halle, and subsequently at Dorpat. He is farther fortunate in having had his work translated into French, by Professor Martins, of Paris, a gentleman who has had a most extensive opportunity for acquiring a knowledge of climate, being practically acquainted with every climate which prevails between the summit of Mont Blanc, at which elevation he stood so recently as August last, and the 79° of N. L., which he reached, as a member of the French Commission of Observation, in 1839, from which he returned by land, while a great many others accompanied the ships on their homeward voyage. Most fortunate of all is the work to have found for its translator into English a gentleman so well qualified for the task as Mr. Walker, who had been employed to complete Lardner's *Manual of Electricity*, for the Cabinet Cyclopædia, and has subsequently discharged the duties of editor of the *Electrical Magazine*, an occupation well fitted to place him *au niveau* of all the recent observations and discoveries on the subject. Thus we have a work combining the knowledge of three most competent writers, the whole most methodically arranged and skilfully digested. It begins in so plain and intelligible a manner, that the veriest tyro can encounter no difficulty in following it step by step.

It would be out of place here to enter into an examination of the various sec-

tions of the work, but every one must feel that it is a subject intimately connected with our avocations, when the medical profession is viewed in its true and exalted character, and strives to prevent as well as cure diseases.

The connection of certain forms of disease with a certain constitution of the atmosphere is universally admitted; yet we are far from possessing precise knowledge on this important point. Lengthened observations are required before any inferences of value can be drawn; and it is less extraordinary than ordinary phenomena which should be recorded. The former are not without their use. Should any marked increase of the weight of the atmosphere, like that recorded by Dr. Prout, which he observed for six weeks previous to the outbreak of the cholera in London, in 1832, prevail, we might reasonably expect, we trust not that fearful visitation, but probably some other formidable epidemic, and take timely measures against its incursion. Some other interesting instances are given by Dr. Holland, in his *Medical Notes*, ch. xxviii. "On the Influence of Weather in Relation to Disease." In this Journal, (vol. xvii. p. 866,) we cited some striking cases, especially those alluded to in an able paper on *Medical Topography*, in the *Edinburgh Medical and Surgical Journal*, for April, 1821. Mr. Addison, of Great Malvern, has likewise furnished some apposite instances, (*Medical Gazette*, vol. ix., p. 752.) These, we hope, will enlist medical men in the cause, for, as Professor Kaemtz remarks, meteorology is a science which can advance only by the co-operation of a large number of zealous and persevering observers. That the number of these will be increased by the perusal of his book, we cannot doubt. Let our readers procure it, and we stake our character for accurate prognostication, they will commence observations, and make careful records from the first of January, to which we are drawing near, and which constitutes the appropriate time from which to start.

MEDICAL GAZETTE.

Friday, December 13, 1844.

"Licet omnibus, licet etiam mihi, dignitatem
Artis Medice tueri; potestas modo veniendi in
 publicum sit, dicendi periculum non recuso."

CICERO.

THE MEETING OF GENERAL
 PRACTITIONERS IN MEDICINE
 AND SURGERY OF THE CITY
 OF WESTMINSTER.

WE cannot help regarding this as by far the most important public meeting which has yet been held in connection with the subject that has engrossed the professional mind for so many months past. The gentlemen who took part in the proceedings, were all of the highest respectability, and of the first standing as family medical attendants, of probably nine-tenths of all who people the most opulent quarters of London. The proceedings themselves had a character which stamps those who took part in them as men of sense and firmness; of talent combined with knowledge of business; and then the cause they advocated has so much of right and reason in it, that we apprehend it will be found very difficult to hinder them of the object they have at heart: the "*Incorporation of the General Practitioners of England into a distinct College.*"

Our views of the propriety of this step are known; we do not think it the best thing that *might* be done; but as we said, some short time ago, in our notice of the "Marylebone Manifesto," if nothing better *is* done, we are not sure that it may not prove the right measure after all. And so it is likely to turn out. Nothing better *has* been done: the College of Physicians are silent; the Council of the College of Surgeons maintain their attitude of hostility to the great body of their members*, and

* According to the vulgar report, the Court of Examiners have actually been rejecting several members of the College of "eight years standing," who had presented themselves for examination as candidates for the Fellowship! as if

we do actually begin to see that there is nothing else for it than the incorporation of the general practitioners of England with an independent College. The legislation that is perpetrated in connection with the medical profession at this time, and we take it for granted that some legislative enactment must now be made, for we cannot be left in the state of chaos into which we were thrown in the beginning of the autumn—the legislation, we say, that now takes place in reference to the medical profession, must recognize the General Practitioner; he is, in fact, the oldest representative of the medical profession in these kingdoms, and as Mr. Fuller well observed, "was recognised before either the College of Physicians, or the College of Surgeons, had an existence."

Our own aspiration has always been that the medical profession might be assimilated to what it is on the continent. That there might be one body, consisting of two classes of practitioners: Physicians and Surgeons with a common title, a common education, common qualifications, and a common place of assembly, the department followed being the result of individual inclination and free-will, in each particular instance; and that these practitioners of medicine and surgery should prescribe, and that their prescriptions should go to the chemist or pharma-

they cared not to say that a man might be good enough to be entrusted with the limbs and lives of the community, but was not good enough to have a voice in the election of a member of the Council from which he had his certificate of general competency. Surely the logic we learned at Marischal College was good logic, when it taught us that a minor was always included in a major proposition: if I am worthy to take off A. B.'s leg, or to cut down upon and secure the artery from which C. D., having wounded himself in the leg, or thigh, or arm, is bleeding to death, surely I am not unworthy among five or six hundred others, of saying aye or no to a proposition, the extent of responsibility involved in which is, whether or not E. F. shall have a seat in an administrative Council made up of twenty-four? But the Court of Examiners of the College of Surgeons—who probably never studied logic at Aberdeen—do not seem to think so; and taking the man, whom eight years before they had pronounced competent, again upon trial, they now pronounce him incompetent.

centist to be compounded. This constitution of the medical profession, it is certain, cannot be accomplished in England at the present moment; we have Physicians, Surgeons, and General Practitioners, the latter of whom are required by force of circumstance to supply medicines from their own houses; but each and all of these departments of the profession must be cared for, must be duly considered, in any legislative measure that will answer the ends for which we believe all legislation is or ought to be undertaken; viz., the protection of the community, and the security of the individual. It obviously will never answer to cut out any Utopian scheme adapted to a state of things having no actual existence. The true business of legislators, as the Duke of Wellington once very wisely said, is, in fact, much less to propose new measures than to adopt those which the common sense of the community led them to believe they required. The enactment, having the medical profession for its object, must necessarily deal with the exigencies of the great mass of its members; it were a mockery to legislate particularly, for fractional portions of the profession, physicians and surgeons, and to leave the integer,—the general practitioner, as much out of the question as if he were not in being.

We also see our way out of our present difficulties by means of the proposed incorporation of general practitioners into a distinct College; and in dim perspective we can even fancy that we see the possible blending, by its means, of the three branches of the medical profession which we now have in England into one harmonious and influential whole.

The grand difficulty we had in contemplating the subject of the incorporation of the general practitioners into a separate College last week was this: that, supposing a charter of incorporation granted, and even a power of

licensing granted—though we saw strong grounds for apprehending a most formidable opposition to the latter proposition,—that the letters testimonial from a body so constituted as the College of General Practitioners of Medicine, Surgery, and Midwifery, would not be received at their fair value either by the public or the profession itself. The policy of the general practitioners at this critical moment would obviously be, as we apprehend it, not only to insist on an independent charter of corporation, but to consideration as a “THIRD ELEMENT” in the medical profession along with the College of Physicians and College of Surgeons. We would not have the general practitioner attempt to sever himself or his College from either or from both of these institutions; he ought to take his stand on his right to consideration as an integral part of the medical profession, and on his title to a share, *but no more than a share*, in the examination of the future general practitioner. The examining body in the new bill was proposed to be constituted of a deputation from the College of Physicians, assisted by the Apothecaries’ Society, and a deputation from the College of Surgeons. Let it be made up of certain numbers deputed from each of the three Royal Colleges, which, together, should constitute the faculty of medicine of England: say *three* from the College of Physicians, *three* from the College of Surgeons, and, to balance these, *six* from the College of General Practitioners. This is but giving the full, instead of the half or quarter, measure of justice which the bill contemplated when it hung the Society of Apothecaries round the neck of the Royal College of Physicians.

The letters testimonial of the general practitioner would then carry the signatures of the presidents of the respective Colleges and Courts of Examiners of each, which would of course com-

prise the men most familiarly known to fame, and of highest eminence in the profession, whether as physicians, surgeons, or general practitioners, by which both the public and the professional man himself would be satisfied.

With this arrangement, the fees paid would of course be divided into *three portions*, instead of being all appropriated by one as heretofore, or by two as contemplated by the new bill; by which each of the three Royal Colleges would thrive, and become powerful; and the interests of every branch of the profession being found to be identical, and frequent contact for a common purpose engendering confidence and respect, is it almost certain that the three Colleges would merge into one GRAND INSTITUTION, animated by a single spirit, though made up of different members, singularly calculated to advance the interests of medical science, and to raise the profession of physic in public estimation.

MEDICAL ETHICS.

THE members of our profession are improving. Even as play-actors and circumforaneous mountebanks make their presence duly known by placards and public advertisements, and sound of trumpet and thump of drum, so do the members of the medical profession begin to let their whereabouts be known by circular letters, and notifications in the newspapers. The following letter has been circulated extensively in Hastings within the last ten days or a fortnight, and as it is a printed and public document, we cannot suppose there is any impropriety in our republishing it, and making it still more notorious. When its author printed it, he of course did not intend that it should remain unrecd; and he will therefore be indebted to us for making it still better known than it is. In delicacy to a juvenile brother, however, we only give the initials.

“C—— B——, M.D., Member of the Royal College of Surgeons of England, Licentiate of the Worshipful Society of Apothecaries, London, Member of the Royal Medical and Hunterian Medical Societies, and of the Obstetrical Department of Queen's College, Edinburgh, and formerly House-Surgeon to the Edinburgh Royal Infirmary, in selecting Hastings as his future residence, for the purpose of practising as a Surgeon, begs to submit to the inspection of the Nobility, Clergy, Gentry, and the public in general, the following testimonials of his professional attainments.”

Whereupon follows a number of testimonials, mostly from Edinburgh teachers, all declaring what a very clever young man Dr. C—— B—— is. The professors (extra-academicals, we think, every one) have much satisfaction, or much pleasure, or great pleasure, in bearing testimony to the talents, zeal, assiduity, and success with which C—— B——, M.D. prosecuted his studies. From these same certificates we learn that C—— B——, M.D., during the term of his pupilage, gained a medal in the surgical class, the first prize in the materia medica class, the prize given annually in the class on the practice of physic, and the first medal in the midwifery class. We farther learn, that the same C—— B——, M.D., during the session 1843-44, wrote his thesis “upon the general nature and treatment of scrofulous disorders,” “which displayed an unusual knowledge of those dangerous maladies;” and by a foot-note to the title of the thesis—the foot-note being evidently added by C—— B——, M.D., for the edification of all whom it may concern—“that consumption is one of the worst forms of scrofula.” The circular winds up with an “N.B. Dr. B—— will give gratuitous advice on any medical or surgical case, to the poor of the town and neighbourhood, between

the hours of 9 and 11 A.M., every Monday and Friday, at his present residence, No. 13, Hill Street."

We make no comment upon this circular: we can but regret that things have come to such a pass with the members of the medical profession, that they are compelled to resort to such means for obtaining notoriety. One thing, however, we do feel called upon to object to, and this is, the parade of gratuitous advice to the poor on Monday and Friday morning. Dr. B—— may certainly settle himself where he pleases, but he has no right to take the bread out of honest men's mouths, by offering that for nothing by which they live.

As we are upon this subject, we may as well notice a circular of another description which appears to have been sent to every medical man in the metropolis whose name appears in the Post Office Directory. It purports to have come, or at all events, it is intended to be addressed to the Editors of the London Medical Directory, care of C. Mitchell, Publisher, Red Lion Court, Fleet Street. These gentlemen appear disposed to anticipate Sir James Graham's scheme for general medical registration; they say, the legal profession has its law list, in which the name of every legally qualified practitioner in the kingdom is enrolled, and also an ample London Law Directory, containing every particular respecting the constitution of the Courts of Law, &c. and the names of persons engaged in the legal profession in the metropolis. The London Medical Directory proposes to itself more than this; it will not only give the name and address of every physician, surgeon, and apothecary, resident in London and its vicinity, but it is also intended to give "brief professional notices comprising the nature and date of his qualification,

diploma, or license, description of practice, general or special; whether connected with any hospital, dispensary, infirmary, learned society, club, or other public institution; titles of his works, and nature of his contributions to medical or general and periodical literature; the discoveries or improvements he may claim; comprehending also any other point of interest appertaining to his professional life." With a view to assisting them in their enterprise, the editors of the London Medical Directory request information on certain particulars, with which we must presume our readers to be as familiar as ourselves, and conclude with the following general request: "Please to add any facts connected with yourself, appertaining to your position in the profession, not comprehended in these queries."

If any of our brethren allow the world to remain in ignorance of any one particular which he himself thinks it of importance they should know, they will plainly have themselves to blame: the editors of the London Medical Directory will commit the information they receive to the steam-press, and it will of course be immediately distributed far and wide.

The idea here may be ingenious, but it is not new. We remember,—what shall we say, something like thirty years ago? a learned gentleman, but very poor, who started the same notion, and hunted it to a successful conclusion. This poor man's name we think was Nesbitt. He waited upon all the members of the medical profession domiciled in London, especially the young ones, to whom he of course made it appear that their very existence was involved in their cutting a favourable figure in the pages of the work he projected, and he requested information by private letter precisely of the same kind as that which is now required by the editors of

the London Medical Directory;—the name at full length; the residence—of course every medical man wishes his residence to be known; his qualification, where obtained, and the date—and in those days there were not so many Giessen, Erlangen, and other medical degrees, that can be obtained without residence and without study, as in the present times;—if the author of any work, and its title; if a contributor to the periodicals; if the inventor or proposer of any medical or other novelty; if possessed of any medical appointment; if the member of any learned society, or of any of the clubs, &c.: and precisely as the editors of the London Medical Directory do in circular, did poor Dr. Nesbitt request that the name of the party he called upon might be added to his list of subscribers to his work. What the sum may be which the editors of the London Medical Directory propose for their publication we know not, but Dr. Nesbitt's, we remember, was one guinea. Dr. Nesbitt's book saw the light in due season, and each worthy member of the Royal College of Physicians and the Royal College of Surgeons, *who had subscribed his guinea*, had the satisfaction of viewing his own portrait drawn from the life by himself.

The business did not end here, however; money—even a very handsome sum—will come to an end: and the exchequer, nndry, must again be supplied. Dr. Nesbitt now began visiting his old supporters,—not to speak to them in the character of supporters of themselves,—and informed them, with distress and alarm in his air, that all his private papers, including the letter from Dr. — or Mr. —, had been seized upon by ruthless creditors, who threatened to publish them as they were, and without any such castrations as he (Dr. Nesbitt) had thought it right to perform upon them, unless they were severally redeemed at handsome sums, varying, of course, with the presumed capabilities of each individual contributor: in one case one guinea, in another case two guineas, in a third three guineas, and in a fourth, and where the writer had “laid it on with a trowel,” and could stand the shot, five guineas—sums at which the respective writers of those letters very generally saw the propriety of redeeming them. By *this ingenious procedare*, Dr. Nesbitt re-

cruited his exhausted finances for a time, and the writers of the several letters alluded to had an opportunity of putting them in the fire.

A Medical Directory we do not object to; but it must be without note or comment.

MOVEMENT IN THE PROFESSION.

THE agitation has not yet come to an end: from the *Somerset County Gazette* of the 7th inst. we find that the members of the Taunton and Somerset branch of the Provincial Medical and Surgical Association, and other gentlemen of the medical profession, met on Wednesday, the 4th, for the purpose of taking into consideration the “Bill.”—Dr. Macmullen in the Chair, at which the usual resolutions were passed. The Editor of the *Somerset County Gazette*, in his leading article of the day on which he reports the proceedings of the meeting, makes the following observations:—

Sir James Graham's Medical Bill.—Our good friends, the Doctors, have this week achieved a double triumph. They have demolished, as far as argument can go, the pet measure of the Home Secretary, and, as a necessary consequence, one of Pattison's best dinners. To be serious, we were not fully aware how extensively the public interests are involved in this measure, which is ostensibly one for the regulation and government of medical practice only. It is a measure which, under the guise of liberalism, hides the worst principles of by-gone ages. It goes to establish a despotism in Government, whilst the presumptuous, though unskilful, and the fraudulent, are invited and encouraged to occupy a prominent position in the commonwealth of physic. The great democratic principle of moulding a popular government by the popular will was argumentatively but boldly assumed by Dr. Burridge, as the only just basis of legislation, and as of peculiar applicability to the medical world.

Our Saxon notions of self-government were somewhat at variance with Sir James Graham's very modest and characteristic proposal to rule the doctors *himself*, with the aid of six Regius Professors, who are, of course, nominated to office by the Crown; six laymen, to be directly nominated by the Crown; and six gentlemen to be elected by the Royal Colleges, subject to a *veto* from the Crown. These very independent coadjutors he proposes to secure by paying them *himself*, in proportion to their services (to whom?) Truly about as corrupt a job as can well be!”

The speeches at this Meeting were able, the spirit excellent, and the proceedings concluded, as the Editor has shown, by about

thirty medical gentlemen dining together at Pattison's Hotel, where, as usual, "an excellent repast was provided."

A large and respectable meeting of the profession was held at Dorchester, on Friday last, in the Board Room of the Dorset County Hospital,—Dr. Jackson, of Dorchester, in the Chair—at which Mr. Spooner, of Blandford, read what has been characterised as a very able analysis of the Bill, accompanied with observations for the information and guidance of those whom time and opportunity had not allowed to make themselves masters of the subject. At this meeting we are pleased to see what we believe to be a better understanding of the projected measure, than we have generally remarked, and we regret that the happy idea of Mr. Spooner has not been more generally acted upon at the meetings that have already taken place. The resolutions did not differ essentially, we think, from those that have generally been adopted. The Editor of the *Dorset County Chronicle* has a good article in the Number of his Paper, in which the proceedings of the Meeting are reported, and sums up with the following paragraph:—

"It will be seen, then, that how useful soever may be some of the details of the bill, it will, if passed, have the effect of discouraging the most important and numerous branch of the profession, at the same time that it will offer encouragement to the practice of the ignorant and impudent pretender."

But the important meeting of all was that which was held on Saturday evening last, at the Hanover Square Rooms, Mr. Pennington in the chair, for the purpose of taking measures for the incorporation of the General Practitioners of England into a distinct College of their own. The Resolutions passed at this Meeting were to the following effect:—

Resolution 1—"That this meeting is decidedly of opinion that prior to the passing of any Bill for the regulation of the practice of medicine and surgery, it is of the utmost importance to the interests of the public, that the general practitioners of medicine, surgery, and midwifery, should be legally recognized and placed in an independent position; and that the executive government be respectfully and earnestly requested to suspend the further consideration of the Bill laid before Parliament at the close of the last session, until this object has been attained."

Resolution 2—"That in furtherance of the object of the former resolution, it is the opinion of this meeting that an association should be immediately formed, under the title of 'The Association of General Practitioners in Medicine, Surgery, and Midwifery.'"

Resolution 3—"That this association use

its best efforts to obtain a complete organization of the general practitioners for the purpose of petitioning for a Charter of Incorporation, to be sanctioned by Act of Parliament, and for taking such other steps as circumstances may from time to time render necessary for the protection of their interests."

Resolution 4—"That the Society of Apothecaries be solicited to co-operate with this association in furtherance of the objects of the former resolutions."

Resolution 5—"That a Provisional Committee of thirty-one members, with power to add to its numbers, and of which not less than seven shall form a quorum, be elected by this meeting, to carry the objects of the association into effect; also to form laws for its constitution and government, to be submitted to a general meeting for its approval."

Resolution 6—"That the Provisional Committee be empowered to form an union with this association, of the different societies of general practitioners in town and country, instituted for similar objects."

Resolution 7—"That upon its formation, one of the first duties of this association shall be to petition the legislature against the re-introduction of Sir James Graham's Bill, and to use every legal means to prevent its passing through Parliament."

Resolution 8—"That the following gentlemen do constitute the Provisional Committee."

Whereupon, in the account which has been kindly sent us, we find a list of all the most distinguished general practitioners domiciled in the north, north-west, and west of the metropolis.

A full report of the speeches made at this meeting having appeared in all the daily newspapers, we feel ourselves relieved of the necessity of making any extracts from them. The Meeting was conducted with the greatest harmony, and with so much tact and system that it is impossible to see the general practitioners of London as otherwise than excellent men of business, well acquainted with the management of affairs that interest themselves, and likely, in the long run, to prove most formidable opponents in any persevering attempt that is made to depreciate or to crush them. "Wherever tyranny becomes exorbitant," as an old and excellent writer has it, "and is not to be curbed by gentle methods, it cancels all the bonds of allegiance: self-preservation, whether natural or politic, being a thing that is indispensably necessary. For would it not be a pleasant thing that one should load another with insufferable insolencies, trusting to this, that the injured person will not defend himself, for fear forsooth of being thought disloyal, though at the same time he has no other remedy for

himself but by being so? For it is undoubtedly a much less fault to be unfaithful to a tyrant, than to establish a succession of tyrants by a tame obedience*.”

REMARKS ON DR. GUY AND HIS REVIEWER.

DR. GUY is instant with us, and seems to insist on our acting as umpire in his case. This we might very well decline; but, urged to the subject, we have thought it fair to take up a couple of the points brought forward by our reviewer, for particular review. We shall take those that stand most prominently forward in the criticism—the *arsenite of copper* and the *sulphuret of lead*,—and having looked rather closely at the construction of Dr. Guy's "Principles," in contrast with that of Mr. Taylor's "Manual," we shall take a few of the points, but always in connection with the one he has touched on in his reply.

1. Dr. Guy considers that he was not fairly treated in respect to the quotation "on habit," which was made from his work. We took this as the first instance that presented itself. There are undoubtedly in Dr. Guy's book stronger instances of plagiarism than this, but we altogether object to the manner in which he treats Mr. Taylor's Manual. He makes extracts, slightly alters the language, intersperses some remarks of his own, and then claims merit for "originality," and fulness of detail. Had he copied Mr. Taylor's Manual verbatim, a charge which we did not make, but on the contrary stated that he had abridged it, there might have been some ground for the line of defence which he has chosen to adopt. It was our business to compare *those parts which resembled each other* in the two works:—the parts which *differed* might have been introduced in order to prevent that resemblance from being easily detected. We express this opinion from having since found that many of the methods of testing poisons, used by Mr. Taylor, and not found in the works of Orfila or Christison, have been taken without acknowledgment by Dr. Guy, and so shifted and transposed, as to make it rather difficult to detect the fact, though it is no less certain on that account. Dr. Guy appears to imagine that it is no offence to use the writings of another author in this way; but to that opinion we cannot assent.

2. With respect to the arsenite of copper, Dr. Guy is under an entire misapprehension. It has been known to all chemists, since the discovery of this compound by Scheele, more than sixty years ago, that arsenious acid might be obtained by heating the arsenite of copper; but, as far as we know, in no work on toxicology

prior to Mr. Taylor's was this given as a simple method of identifying the green precipitate formed in arsenical solutions by the copper test. Some toxicologists have given the original experiment of Scheele under the lead of arsenite of copper, but Mr. Taylor and Dr. Guy give it as a collateral proof, in the use of the *liquid reagents* for arsenic. It is not a little remarkable that Dr. Guy should thus give this experiment exactly in the place, and for the very purpose for which Mr. Taylor gives it, and for which no other toxicologist has hitherto given it.

Dr. Guy says that the serious "oversight" which he committed in stating, that metallic arsenic might be obtained by heating arsenite of copper, proves of how little importance he deems the test. We said nothing about its importance as a test; we adduced it as an instance of Dr. Guy copying Mr. Taylor's Manual, and at the same time entirely misunderstanding the nature of the experiment. These points we think are clearly established by the foregoing remarks.

3. Dr. Guy's account of the equivalent of the sulphuret of lead is a piece of mystification. In no work on toxicology, we believe, prior to Mr. Taylor's were the *quantitative analyses* for poisons given. Dr. Guy has not only imitated Mr. Taylor in this respect, but in most of the poisons he has taken the identical numbers used by Mr. Taylor, simply converting the decimal into a fraction, so as to give an apparent variation. In the quantitative analysis for copper, Dr. Guy gives the proportion of black oxide of copper which corresponds, not to a certain weight of *metal*, but of the *metallic salt*—*i. e.* the sulphate. In the quantitative analysis for lead, however, he gives the weight of sulphuret corresponding to the weight of the *metal*—lead; which has no more to do with the determination of the weights of the salts than if he had merely calculated the sulphur, and not the quantity of sulphuric acid, from a given weight of sulphate of larytes. Why has Dr. Guy made a difference with respect to copper and lead? The answer is, that in this, as in some other cases, he has blindly copied Mr. Taylor without perceiving the true object or intention of quantitative analysis. There is no stronger proof of plagiarism than that deficiencies or errors in a work, are thus indiscriminately copied.

We have Mr. Taylor's authority for asserting that the formula for quantitative analysis given by Dr. Guy at p. 562 of his volume, is one which has been used by him in his public lectures at Guy's Hospital since 1831. It is there given without the least acknowledgment, although Dr. Guy either copied it, or had a good opportunity of copying it, when he was taking his "very short but useful notes" at the "familiar demonstrations on toxicology" given by Mr. Taylor.

* Dr. Geddes, Church History of Ethiopia.

With respect to equivalents generally, the facts are still more strongly against Dr. Guy, and still more clearly shew the system of copying which he has pursued. All chemists agree about the equivalents of *dry acids*, and all equivalents of acids are given in this form only in chemical works, but it is well known that there are great differences of opinion in respect to the quantity of water with which they are combined as *Hydrates*. Sulphuric acid may be either a mono-

or a bihydrate—nitric acid a mono- or sesquihydrate; and with respect to muriatic acid, the differences of opinion respecting the quantity of water combined with it, are still greater. Now what do we find in Dr. Guy's book:—that on these very points, where some originality or difference of opinion might fairly be expected, there is an exact agreement with the Manual. The quantitative analyses in the two works, stand thus:

	Taylor.	Guy.	real result.
Sulphuric Acid (100 gr. Sulph. Bar.) =	41½ gr.	41½	41·52
Nitric Acid (100 gr. Sulph. Potash) =	about 82	about 82	81·8
Muriatic Acid (100 gr. Chlor. Silver) =	69	69	69·44
Oxalic Acid (100 gr. Oxalate Lead) =	42 crd. acid	42 crd. acid	41·9

This table appears to us to furnish irrefragable proof, not only that Dr. Guy has adopted the plan of quantitative analysis from Mr. Taylor's Manual, but that he has actually *appropriated his results*. It is clear to us, that Dr. Guy could not have calculated the numbers for himself, or we should not have found him using integers, dropping decimals, or substituting fractions, exactly where the same course is pursued in the Manual. By the above table he stands convicted; and yet he lost no time in appearing at our tribunal, pleading not guilty, and condemning the charge of plagiarism brought against him by the reviewer as most unfounded and unjust! We might

carry out the proof still farther with respect to other parts of his "Principles," but it would require a reprint of much of the whole book to show the real extent of the plagiarisms of which he has been guilty. We think it right, however, to present the following table of the tests for arsenic, as they are described in the works of Orfila, Christison, Taylor, and Guy. We have taken Dr. Christison's second edition, as being at hand: we have no reason to believe that the tests employed by this excellent toxicologist have been much altered in the last edition of his valuable treatise on poisons. Orfila's fourth edition was published in 1843.

Mode of using the tests and processes for arsenic adopted by

Orfila, 1th Edition.

Arsenious Acid as a Solid.

1. Taste.
2. Heated on copper or iron, volatilized without smell; on red hot charcoal, garlick odour.
3. Reduction test. Heated in a tube with carbon and carbonate of potash.

Tests in solution.

1. Solubility of arsenious acid—acid taste.
2. Precipitated yellow by sulphuretted hydrogen properties of precipitate.

Objection to tests.—Arsenic present in glass—denied.

Marsh's test.

3. Ammonio sulphate cop- } No observa-
- per. } tions or objec-
4. Ammonio nitrate silver } tions stated.

Process for Organic Liquids.

Reinsch's test.

Arsenite of potash. Arsenite copper.

Arsenates.

Sulphurets of arsenic.

Christison, 2d Edition.

Arsenious Acid as a Solid.

1. Taste.
2. Heated sublimes in crystals.
3. Heated with charcoal. Reduction test.
4. Solubility in water.

Tests as a solid.

1. Reduction test charcoal or black flux.
2. Lead stains in glass.
3. Tellurium, cadmium, and potassium, differences of cadmium not particularized.
3. Metallic crust converted to arsenious acid dissolved in water and tested.
4. Garlick odour.
5. Deposit on copper by reduction with charcoal.
6. White powder moistened with ammonio sulphate copper.

Tests in solution.

1. Sulphuretted hydrogen precipitate reduced by flux.

Objections to the test.—Cadmium, tin, and antimony—answers to the objections.

2. Ammonio-nitrate silver.

Objections.—An alkaline phosphate (phosphoric acid not mentioned)—common salt.

3. Ammonio sulphate copper—objections. Bichrom potash.

4. Lime water.

5. Separation by galvanism.

Organic mixtures.

Arsenite of copper. Arsenite of potash.

Arsenate of Potash.

Sulphurets arsenic.

Mode of using the Tests and Processes for Arsenic adopted by

Taylor.

Arsenious acid, solid masses or powder.—
Solubility in water.—Taste.

Powder.

1. Entirely volatilized by heat any residue impurity, sometimes plaster of Paris.
2. Heated in small tube sublimes in crystals.
3. Dissolved by caustic potash, forming arsenite potash.
4. Powder in watch-glass, with hydrosulphuret of ammonia. No change of colour until heated and ammonia expelled; yellow sesquisulphuret of arsenic left.
5. Reduction by carbon, and fluxes: garlick odour.

Objections.

Corrosive sublimate, volatile like arsenic, but turned yellow by potash.

1. Glass black lustre from lead.
2. Charcoal.
3. Arsenic in glass lost by heat.
4. Oxide of cadmium.
5. Mercury in white silver globules.

Solution.

Faint acid reaction.

1. Evaporated on glass plate, well-formed octohedral crystals obtained.
2. Ammonio nit. silver.
3. Ammonio sulph. copper, green precipitate, yields arsenious acid on sublimation, in crystals.

Objections to tests.

To silver test a phosphate and *phosphoric acid* (hitherto, we believe, overlooked).

Organic liquids coloured by the tests.

4. *Gaseous test.*—Sulph. hyd. Hydrospt. amm. gives no precipitate without an acid. Properties of precipitate (see Manual, page 149).

Objections to the test.

Cadmium, tin, and antimony, and answers 149. Substance of these copied by Guy, but the order of objections somewhat changed.

Marsh's test.

Reinsch's test. In this one objection, hitherto, we believe, unnoticed (an alkaline sulphuret), taken by Guy from the Manual.

Processes in organic liquids.

Quantitative analysis.

Arsenic acid, page 159. Order of tests taken by Guy, but apparently purposely inverted.

Sulphurets of arsenic.

Arsenuretted hydrogen.

Guy.

The experiments in Italics are taken from the Manual: we do not find them in Orfila or Christison's work, but they are to be found in the Manual.

Arsenious acid, solid and in powder.

1. Solubility in water.
2. Slight acid reaction.
3. Faint sweet taste.
4. *Solution evaporated — well-formed octohedral crystals.*
5. *Combines with alkalis, forming soluble arsenites.*

Powder.

1. Entire volatility by heat — plaster of Paris may be left.
2. *Add liquor potassæ, no change. Corr. sub. turned yellow.*
3. *Powder in watch-glass, with hydros. ammonia.—No immediate effect. Yellow sulphuret after some hours, or after heating it.*
4. Heated in tube, sublimes in octohedral crystals.
5. Reduction by charcoal and fluxes.

Objections.

1. Charcoal.
2. Mercury.
3. *Oxide cadmium* (copied from Manual almost *ipsisimis verbis*).
3. Lead in glass.
4. Arsenic in glass.

Solution.

1. Sulphuretted hydrogen.
2. Ammon. nit. silver.
3. Ammon. sulph. copper.
4. *Hydrosulphuret ammonia, and acetic acid.*

Objections to liquid tests.

Alkaline phosphate, and *solution of phosphoric acid.*

Objections to Amm. Sulph. Copper.

Among the answers, a ring of *metal* (*not arsenious acid*) obtained on heating the precipitate!

Gaseous test.—Sulph. Hydrogen.

Objections.—Cadmium, tin, and antimony, and answers identical page 457.

Marsh's test.

Reinsch's test.

Processes for organic mixtures.

Quantitative analysis.

Arsenic acid: analysis inverted, but passage identical (see Guy, page 464).

Sulphurets of arsenic.

Arsenites, potash and copper.

4. In no work on toxicology before Mr. Taylor's were there distinct chapters, sections, or paragraphs, on the rules for in-

vestigating cases of poisoning; on the period of time within which poisons prove fatal, including the longest and the shortest known

cases; on the quantity of poison required to destroy life, with the largest and the smallest doses; and, lastly, on the quantitative analysis of poisons. Some few scattered facts relating to these questions were to be found in other works on toxicology, but they are here for the first time classified and arranged, together with all the objections to the tests for poisons, and the requisite chemical answers to the objections. Dr. Guy adopts the same subdivisions, and yet he has the boldness to assert, that the arrangement of his entire part coincides very closely with that adopted by Dr. Christison, and has been "little influenced by his perusal of Mr. Taylor's work." Further, he states that the order in which the several tests are placed is one peculiar to himself, and which he has always followed in his lectures. We have ascertained by inquiry, that Dr. Guy has lectured for five years—that the first and, we believe, only course of practical toxicology which he ever attended, was that to which he was gratuitously admitted by Mr. Taylor in the winter of 1838; and yet he wishes us to believe, that the notes which he then took, and the experiments which he then for the first time saw, form no part of his work! Let any one take the pains to compare his tests with those given by Orfila, Christison, and Taylor, and we do not hesitate to say, that the resemblance to Mr. Taylor's mode of using these tests, will be found much stronger than in the other cases, and the method of testing solid poisons by applying reagents to them, will be found to be almost entirely taken from Mr. Taylor.

One word more with respect to quantitative analysis. Admitting that Dr. Guy, with his five years' experience of chemical toxicology, did more than Orfila or Christison had done before him, *i. e.* attached from his own knowledge of the subject, and without reference to Mr. Taylor's, or any other work, the quantitative analyses of poisons—we still beg our readers' attention to this remarkable coincidence: to whatever poison Mr. Taylor gives a quantitative analysis Dr. Guy does the same, and where Mr. Taylor omits it, as in the case of the alkalies, the iodide of potassium, and other compounds, Dr. Guy also omits it. Thus, Mr. Taylor gives a quantitative analysis for antimony, and not for tin, and Dr. Guy does the same. What inference can be drawn from this, and his copying the defect in the case of the sulphuret of lead, than that he has appropriated the results of Mr. Taylor's labours? We think these facts prove that the "odious accusation" has not been built upon so slender a foundation as Dr. Guy would have us and our readers to believe.

Dr. Guy thinks that it is impossible "to

treat the facts of chemistry as subjects of dispute, or to display originality in chemical equivalents;" and this is his answer to the charge of appropriating the tests and quantitative analyses from the Manual! Chemical toxicology and chemistry are, however, in this respect, widely different. There are very few who employ exactly the same tests for poisons, or if they do, they have some peculiar method of operating with them. There is sufficient room for originality, and if any one doubts this let him draw up a list of the tests actually used, and the mode of using them, by Orfila, Christison, and Taylor; he will then see that, although some well-established tests and processes are common, as they must necessarily be, yet there are many others either new, or modifications of old tests, which are peculiar to each writer. On placing Guy's tests by the side of these, they will be found to assimilate very closely to those of the Manual, and some of them have never yet appeared in any other toxicological treatise. They may, it is true, be founded on well-known chemical principles, as all useful tests must be; but it is the application of them to special purposes that we have to regard; and in this application, Dr. Guy approaches so closely to Mr. Taylor, if we except an occasional transposition of an experiment in the series, by which the order of resemblance is only apparently destroyed,—that we hardly know how to receive Dr. Guy's assertion—"that the order in which the several tests are placed is one *peculiar to myself*, and which I have *always* followed in my lectures."

There is only one additional point which requires notice. In the review, we find it stated that Mr. Taylor was deeply versed in medico-legal lore when Dr. Guy could have been little more than a school-boy—nothing more than a medical student certainly. From inquiries which we have made, we find that this statement, at least the latter part of it, is substantially correct. Mr. Taylor, it seems, began to lecture at Guy's Hospital in March, 1831. Dr. Guy received his first lessons in Toxicology from Mr. Taylor, in the chemical laboratory of Guy's Hospital, in the winter of 1838. Thus Mr. Taylor had been a teacher of the subject seven years before Dr. Guy had even become a pupil, in reference to Medical Jurisprudence and Toxicology. We understand that Mr. Taylor gave him permission, by courtesy, to attend his demonstrations on Toxicology, and that no restrictions were placed upon his performing experiments, making notes of the results, or copying any diagrams, tables, or formulæ, used at the lectures. We are now informed, by Dr. Guy, that these were "*very short notes*," and of no use to him in the composition of his work!

We here close this unpleasant subject. We have said this much to show that our reviewer was justified in the severity of his criticism, and we shall now leave Dr. Guy definitively to the judgment of his professional brethren. We thought of winding up by quoting Dr. Guy's own letter, published in the *Lancet* a few weeks ago, upon this very subject; but we thought it would be strengthening our hands too much.

SURGERY OF THE HOTEL DIEU.

"THEY manage these things better in France!" it is often said, and there are many among us, particularly younger members of the profession, who really think so, and who advocate the system of public concurrence among candidates for hospital appointments, and who maintain that the opportunities for the education of medical men are superior in Paris to what they are in London. "The tree is known," &c. Let our readers accompany us through the details of the following case, and, with us, admire the procedure of a child of the *Concours*, which we will not do our neighbours the injustice to characterise as "French surgery," but which we may still be permitted to call "surgery of a professor of the *Hôtel Dieu*," an establishment which is one of the grand points of attraction with English and American students of their profession.

A young man was admitted into the *Hôtel Dieu* affected with ex-ophthalmia, or protrusion of the left eye from the orbit, very probably occasioned, as the Professor observed, by the presence of a tumor in the bottom of the orbit, which, pushing the eyeball forwards, and compressing the optic nerve, destroyed the sight; for the eye, although to all outward appearance sound, was completely without the faculty of vision. What may be the nature of the infra-orbitary tumor? It is difficult to predict. Perhaps it is not of a malignant kind, and yet it could not be removed without removing the eyeball at the same time. I greatly regret having to sacrifice so important an organ as the eye, the more as it is healthy in appearance; but I do not see how else the ophthalmia is to be remedied. The operation was done, and deftly done; the eye was extirpated to the very root of the optic nerve, and the patient was dressed and sent off to bed. The Professor continued: "Before proceeding to the operation, the idea struck me that it might perhaps be possible to remove the tumor without touching the eye, and so this organ would have been left in its place, if not as an instrument of vision (for I did not believe it possible to restore its powers) yet as an appearance, or as a stump upon which an artificial eye might have been

engrafted. Unquestionably the position of the patient would have been better than that it is now with the orbit empty; but I am disposed to think that the advantages of moment to a person mixing in society, and interested in hiding a deformity, were very trifling in connection with our patient, whose lot was cast in the country. And then the removal of the tumor, sparing the eye, it still being possible, would nevertheless have been attended with great difficulties; so that, all things considered, I have thought it best to proceed as I have done, sacrificing an organ which could no longer suffice for the uses for which it was intended by nature.

"What may be the nature of the tumor which we have now before us, it is difficult to say. From the absence of all severe and lancinating pain, however, we might infer that the tumor was not melanotic; and now that it is divided in two nothing is seen that positively resembles cancer.

The lad died a few days after the operation, with all the symptoms of meningeal and encephalic inflammation. "The important point in the necroscopy was the state of the optic nerve—*Eh bien! on le trouva avec toutes les apparences de l'état normal. Well! it was found with every appearance of health.*"

[Comment upon this case would be waste of words: the procedure was in every respect unjustifiable, barbarous; and the poor lad as certainly lost his life through the inhuman practice of the surgeon, as if he had had his throat cut. There can be very little question but that the simple fleshy, or, from aught we have to the contrary, steatomatous tumor, removed, and the optic nerve long kept on the stretch relieved, it would gradually have recovered its powers, so that the poor fellow would not only have run no risk of his life, but would have recovered freed from his deformity, and with his vision perfect in both eyes. The additional risk to life from so serious an operation as extirpating the eye-ball seems never to have been taken into the cruel surgeon's mind; to extirpate a tumor from the orbit may be, must be, a difficult operation; but it is not necessarily one that brings the life of the patient into jeopardy, which the extirpation of the eye-ball necessarily does.—*Ed. Gaz.*]

LUXATION OF THE HEAD, AND FRACTURE OF THE NECK, OF THE THIGH BONE.

A MAN, 70 years of age, fell from his waggon, and was dragged along the ground for some short distance: found himself incapable of moving afterwards. I found the right thigh in the position indicative of fracture of the

neck : the limb was shortened three inches, it was easily brought down by extension ; rotation was readily performed, and no crepitation in the seat of the joint or the trochanter, which was no longer to be felt ; in the groin, on the contrary, and under the skin and fascia, there was a globular body the size of an apple, and which could be pushed a few lines in every direction ; it was the head of the thigh bone detached from the neck and shaft. A surgeon had already seen the patient before my visit ; had diagnosticated luxation forwards, and with the help of several men and great exertion, had attempted reduction, in the course of which, the patient himself and the bystanders felt and heard a loud crack. It is possible that the thigh had been first luxated and then broken in the neck, but I can scarcely suppose that this was the case, or whence the great difficulty in the attempt to reduce ? and whence the crack without reduction ? An incomplete fracture before the attempt at reduction can scarcely be conceived, but it is very possible that the natural fragility of the bones in a man of 70 years of age, permitted a fracture to take place in the course of the vigorous effort that was made to reduce the luxation. In a youthful subject I should probably have resolved on removing the fragment ; the motive to have done so was sufficient from the amount of disturbance it occasioned by pressing upon the nerves and vessels of the groin ; in present circumstances, however, I contented myself with placing the limb in the easiest position for the patient, and without extension. The numbness and swelling of the limb gradually disappeared in the course of four months, the head of the thigh bone occasioned neither inflammation nor suppuration, and by and by became fixed by adhesions in its new situation. The shortened thigh is not without motion in its new joint, and the old man goes about with the help of crutches.—*Basedow, in Caspar's Wochenschrift*, No. 29, 1844.

DR. HOME.

DR. HOME, long Professor of Materia Medica, and then Professor of the Practice of Physic in the University of Edinburgh, from which he had retired but a few years, died lately at a very advanced age—86, we believe.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

List of Gentlemen admitted Members, Dec. 6.—G. F. D. Evans.—V. Hutchinson.—J. A. Walmsley.—T. H. Watt.—W. H. Meadows.—R. Thornton.—H. Douglas.

APOTHECARIES' HALL.

Gentlemen who have obtained Certificates, Dec. 5.—R. Q. Wallace, Dublin.—Henry

Douglas, Grantham.—J. G. Grylls, Cornwall.—R. W. Sanneman, Hounslow.—Geo. Gardiner, Bristol.—R. Scott.

MORTALITY OF THE METROPOLIS.

Deaths from all causes registered in the week ending Saturday, Nov. 30.

ALL CAUSES	1075
SPECIFIED CAUSES	1074
I.—Zymotic (Epidemic, Endemic, and Contagious) Diseases, 220; among which, of—	
Small Pox	46
Measles	30
Scarlatina	56
Whooping Cough	19
Croup	9
Thrush	4
Diarrhoea	7
Dysentery	1
Cholera	0
Influenza	2
Typhus	33
II.—Dropsy, Cancer, and other Diseases of uncertain or variable Seat 123; among which, of—	
Inflammation	1
Dropsy	24
Scrophula	3
Cancer	23
Atrophy	9
Debility	17
Sudden Deaths	26
III.—Diseases of the Brain, Spinal Marrow, Nerves, and Senses, 148; among which, of—	
Hydrocephalus	18
Apoplexy	26
Paralysis	18
Convulsions	52
Insanity	0
Delirium Tremens	5
IV.—Diseases of the Lungs, and of the other Organs of Respiration, 323; among which, of	
Pneumonia	120
Hydrothorax	4
Asthma	22
Phthisis or Consumption	120
Diseases of the Lungs, &c.	20
V.—Diseases of Heart and Blood-vessels	39
VI.—Diseases of the Stomach, Liver, and other Organs of Digestion, 80 among which, of—	
Teething	18
Gastritis	0
Enteritis	13
Tabes	15
Hernia	4
Disease of Stomach, &c.	4
Disease of Liver, &c.	10
VII.—Diseases of the Kidneys, &c.	13
VIII.—Childbirth, Diseases of the Uterus, &c. 12; among which, of—	
Childbirth	10
Disease of Uterus	2
IX.—Rheumatism, Diseases of the Bones, Joints, &c.	4
X.—Diseases of Skin, Cellular Tissue, &c.	1
XI.—Old Age	72
XII.—Violence, Privation, Cold, and Intemperance	39

NOTICE.

DR. HASTINGS and Dr. Storks' communication has been received, and shall appear next week.

WILSON & OGILVY, 57, Skinner Street, London.

THE LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

FRIDAY, DECEMBER 20, 1844.

LECTURES ON THE NATURE AND TREATMENT OF DEFORMITIES,

*Delivered at the Bloomsbury Square
Institution.*

By R. W. TAMPLIN, F.R.C.S.E.
Surgeon to the Institution.

*Treatment of Genu valgum or knock-knee
by general means, mechanical, and sur-
gical and mechanical—Genu extorsum or
outward inclination of the knees—treat-
ment of ditto.*

We will now consider the treatment, which consists of general, mechanical, and surgical and mechanical means combined. In children, when the deformity is slight, or when there is great mobility of the joint, so that the legs can with slight force be brought into the straight position, and when the general health is, and has been disturbed, from whatever cause, your attention must be directed to the improvement of the general health in the first instance, and to the removal of the causes of such disturbance, if they still exist. You will, as I mentioned to you, find the secretions unhealthy, the appetite bad, the surface soft and flabby, and a generally diminished tone of all the tissues, occasionally—I may say frequently; the abdomen large and tumid, either with or without mesenteric disease. You will then have recourse to those measures of relief which may appear best adapted to each individual. I have found alterative doses of the Hydragryi c. Creta every other night, continued for some time (say two or three grains), according to the age of the child, of great use, with Tincture of the Sesquichloride of Iron, in small doses, administered three times a day, either in water or Infusion of Calumba. I say small doses, for I have frequently seen irritation set up in the mucous membrane of the alimentary canal, from what is generally considered as an ordinary dose. Children in

this state do not bear medicine except in the mildest forms, nor is it necessary, for we are not called upon to treat an active disease, nor do we expect any sudden or immediate change; but rather to assist than supersede nature in her efforts. The form I have ordered is ℥ss. of the Tincture to ℥vj. of fluid, of which they take, at twelve months of age, one tea-spoonful, two or three times daily; if two years of age, two tea-spoonfuls at a dose, and so on in proportion; and in this way all the good effects expected are derived without the risk of gastric irritation. You will find it necessary to pay attention to the diet also, which should consist of milk, eggs, meat, and plain food. These unfortunate children are dosed with, what is called, "tea," which means warm water, night and morning, with bread and butter, which is far from sufficient nourishment; occasionally I recommend small quantities of beer; by these means the improvement is generally rapid, if properly followed up by the parent or attendants of the child. If, then, the deformity is to any extent beyond what we should call incipient, you will derive much benefit from the use of the straight wooden splint, either applied by strapping it to the limb through its entire length, or with straps and bandages, as we use at this charity. If, however, the deformity is to any extent, you will find the splint I have adopted and used with great comfort to the patient and satisfaction to myself, the best mechanical means, either with or without an operation (Fig. 1). In the most severe deformity in a child under five years of age, you may cure it in this way, provided you proceed cautiously, and keep the limb in its proper position, well adapted to the splint, which admits of being applied in any position in which the limb may be, from the most simple to the most severe case.

I have used with advantage a splint made of two zinc plates, the one portion to correspond with the thigh, the other with the leg, as in the splint represented, but instead of a screw, a straight piece of iron or wood attached by a hinge to the centre of each of

the portions of the splint on the outside. The zinc, from being soft, admits of being applied close to the limb, and can be fixed by means of strapping in the position in which the joint is; a webbing strap passed round the knee and over the connecting piece of iron, will by gradually tightening it, effectually straighten the limb. In some I have also added a joint in the centre of the iron to correspond with the knee-joint, so as to allow of flexion and extension, but I prefer the knees being kept extended.

FIG. 1.

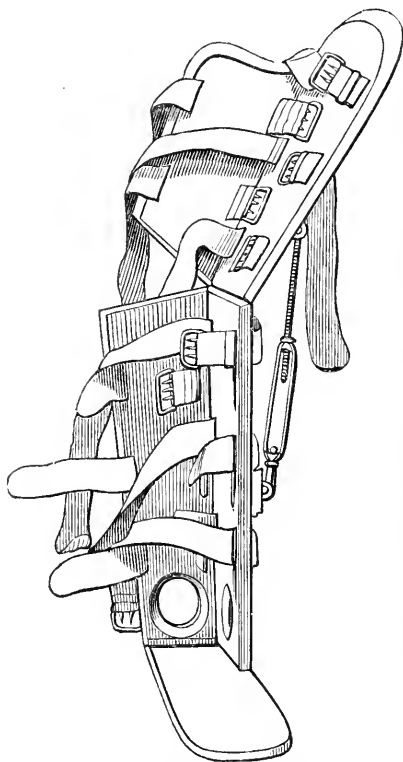


Diagram of the splint, which consists, as may be observed, of two portions, the one for the thigh, the other for the leg, and united by means of a hinge, fixed on the outside of the splints. Straps are alternately placed throughout the entire length, so that the leg is retained in position both to the posterior and lateral surfaces. By means of the male and female screw at the outer side, it can be applied at any angle, and extension can be gradually kept up.

Of course the division of the tendon will expedite the treatment, but not, I think, sufficiently to warrant its being done at this early period. At a later period, however, when the tendon is very tense, I would advise its section, which you will do in the following manner. Let the patient lie on his

side, and let the assistant place one hand under the lower portion of the inner side of the thigh, so that the leg rests as it were on his hand, and with the other hand grasping the leg, let him endeavour to straighten it. In this way the tendon will be rendered more tense, and may be readily felt as it passes on the outside of the joint. You then introduce a small sharp-pointed knife under it, turn the sharp edge towards the tendon, and divide it; or you may adopt this plan, which is sometimes preferable: direct the patient to flex the leg, and direct the assistant offer some resistance, in this way the tendon is raised, as it were, from the joint, when by passing the knife under it, the assistant at the same time forcibly straightening the leg; then on turning the sharp edge towards the tendon you will find it is divided most easily; but you must be careful the knife does not pass through the skin, as by the suddenness with which it is done there is some risk of this occurring.

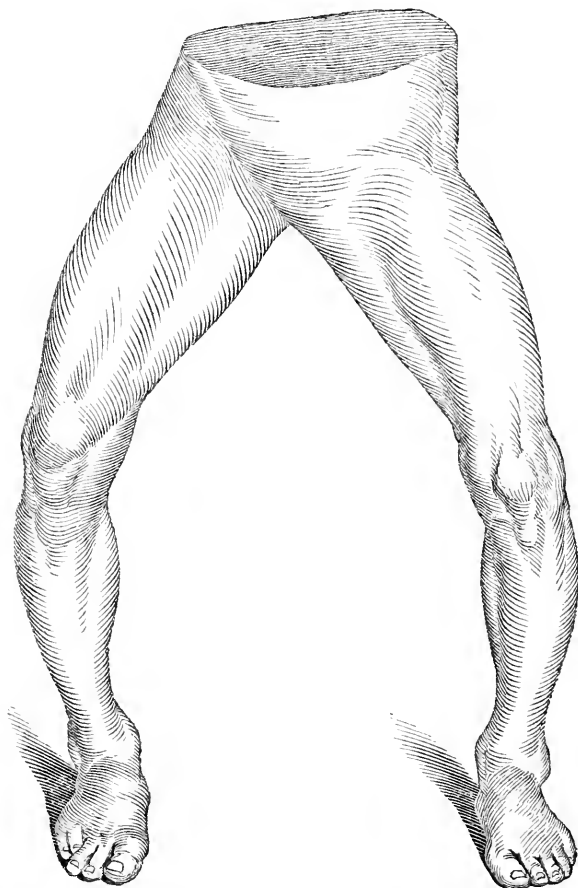
You may occasionally divide the peroneal nerve; I have done so in two instances; paralysis of the flexors of the foot was the result in both cases, which continued from four to eight, or ten weeks, but the power gradually returned, and no evil result followed. If you pass your knife carefully under and close to the tendon, not beyond it, you will not divide the nerve, except it is lying upon the tendon: it is as well to use every precaution to avoid this, as the paralysis occasions a good deal of doubt and uneasiness to the patient, or friends, which you will find the greatest difficulty in allaying, as they will tell you they fear the loss of the use of the foot, which in fact is for a time actually the case. You then place a piece of lint and strapping over the point of puncture, and support the lint with a bandage, either with or without a splint; I prefer in all cases the use of the splint, as it serves to keep the joint motionless, and adds much to the comfort of the patient. In the course of three or four days you will generally find the puncture healed; you then apply the splint, and proceed with the extension, more or less rapidly, according to the severity of the case, the rigidity met with, and the pain experienced by the patient; for I need not tell you, that the restoration of the limb to its natural position, after years of its being kept in the malposition, is always attended with pain; the pain, however, should never be allowed to interfere with the appetite, or rest of the patient: this you may regard as a guide in the treatment. I am now speaking, recollect, of the pain in the joint itself, not that which may be occasioned by undue pressure, which last ought to be immediately relieved; you must at all times be careful that the pressure is uniform throughout the entire extremity, as you may be inconvenienced, and have the treatment retarded, by a slow and

open wound. After the limb is restored to its perfectly straight or natural position, you will order upright supports from the hips downwards, and keep the knee-joint in the straight position during the time exercise is taken; the leg may be flexed and extended at other times. These supports must be continued night and day, until the patient is enabled to stand and walk without the joints yielding, and must not be omitted before, as a relapse will certainly be the consequence, independently of prolonging the treatment. In slight cases, in the adult or youth, irons alone, the knees being kept straight, perfect the cure of this deformity, and in a short time, compared with the more severe. In children, when merely incipient, the use of the rocking-horse, with attention to the general health, will supersede the necessity of mechanical treatment, as there is a constant effort made in riding to cling to the horse, and adduct the legs; hence the bowed condition of the legs of those accustomed from early life to horse exercise. It is of no use to attempt to straighten the legs solely with irons, if the deformity exists to any extent, as the legs will rotate in them, and the thigh and leg become everted, which disguises, but does not relieve, the deformity. Numerous cases of the kind have presented themselves at this Institution. Irons are only of use in severe cases, after the legs are straightened, in maintaining the position, by assisting the joints to bear the superincumbent weight of the body during the time they are incapable of doing so unaided, and allowing exercise to be taken whilst the ligaments are gaining strength, which exercise improves the general health and strength of the patients, and enables them to follow their usual occupations without risk of relapse. It is a common thing to find females with a slight deformity of this kind, or a tendency to it, which I attribute to the great width of the pelvis, compared to that of the male, and which causes the thighs to be separated from each other to such an extent at the upper part, that the articular extremities of the lower ends or condyles are necessarily placed in an increased oblique position, the internal condyle projecting: this alteration in the pelvic extremities is, as you are aware, the only change that takes place (in my opinion) when the deformity arises without debility, or when the articular surfaces of the femur are in their actual proper contact in every direction with the articular surface of the head of the tibia.

I must now draw your attention to another deformity of the knee, namely, outward inclination, or genu extorsum (see fig. 2.); this is also a very common affection in children, whose constitution is naturally unhealthy, and who are rachitic, and is invariably combined with curvature of the tibia and fibula, which I regard as the immediate cause; the patient appears to be bow-legged, when it af-

fects both legs. You will occasionally, but rarely, find it in one extremity, and combined, as you are aware, with knock-knee in the fellow-limb. It does not appear to arise from any alteration in the relative position of the articular surfaces of the tibia or femur, or from any change in the healthy condition of the ligaments attached, at least not permanently, but occurs in this way. If the tibia is curved outwardly in one sweep, commencing just above the internal malleolus, the head of the bone is of course thrown more outwardly than is natural; the femur being held firmly by the connecting ligaments, and being freely moveable in the hip-joint, as a matter of course follows the direction of the tibia; then the legs diverge from each other in one uninterrupted curved line from the hips to the ankles, and if you grasp the thigh firmly, and then attempt to straighten the limb, you will find by doing so, which you generally can to a greater or less extent, that an interspace can be felt between the internal condyle of the femur, and the internal articular surface of the head of the tibia, showing that in their curved position the articular surfaces still remain in actual contact, and that the deformity does not consist in a relaxed condition of the ligaments, but in the articular surface being thrown out of its natural horizontal position. Outward inclination will occasionally be met with to a great extent, the knees being several inches apart, whilst the internal malleoli are in actual contact; it is combined in these severe cases with talipes valgus, as in knock-knee, only with this difference, that in knock-knee the articular cavity of the ankle-joint is in an oblique lateral direction, the outer side being raised and higher than the inner, while in outward inclination of the knee you have just the reverse, namely, the inner side is raised, the outer depressed; in the one case, the stretching and elongation of the internal lateral ligaments arises principally from the pressure occasioned by the weight of the body; in the other, it occurs from the raised portion of the internal malleolus, combined with the weight of the body; or if the astragalus keeps its relative position in the articular cavity, the patient will be thrown on the outer edge of the foot; but as the outer edge is the first portion which touches the ground in these cases, when the weight of the body is thrown upon it, it is forced upwards until the whole of the sole of the foot touches the ground, and this can only take place by the elongation of the internal lateral ligament: you will perceive what I mean by referring to the cast before you. This deformity arises during the early period of childhood; I have never seen it occur at a later period, nor can it, if my opinion be true that the curvature in the bone is the primary cause, as this softened condition of the osseous system is as a rule confined to

FIG. 2.



Cast of a patient 26 years of age, in which may be observed the general curve of the tibia, commencing immediately above the internal malleolus, and the raised condition of the internal malleolus, as described.

childhood; the bones becoming hardened as the child increases in age, and the general health improves, after the irritation of teething, and the eruptive diseases have ceased to exist, provided the osseous disease is not constitutional. Of course you have the rachitic condition in patients who have arrived, or nearly so, at adult age, but these affections differ from those in which the bones merely yield, for in these latter, not only a yielding, but a brittleness of the bones generally exists, which admits of fracture from slight causes, as in the *fragilitas osseum* met with in old people; patients thus affected walk in a very unsteady manner, with what is called "a whaddle," rolling from one side to the other, and do not possess that free motion which is natural in the normal position of the knee-joint. It is true the knee is flexed and extended, but not to its full ex-

tent; the patient losing power in proportion to the deviation from the straight line; it is a hideous deformity, giving the patient an appearance of diminished size and stature, and it is instantly recognised by every individual. The treatment is general and mechanical; in children affected with this deformity, you will find very generally that unhealthy state of constitution I have already described, existing with those affected with the last mentioned deformity; this must, of course, be attended to by administering alteratives and tonics, with attention to the diet. The mechanical means we adopt consist of straight splints on the inner side of the leg, extending high up above the knee, and below the internal malleolus, well padded at the points of pressure, and webbing straps applied round the leg and splint, so that a constant steady pressure may be kept

up : it is only by the most gradual and uninterrupted treatment that good can be obtained, for you must recollect that not only the knees, but the bones also, are affected, and a child cannot bear any amount of continued pressure ; it must be so applied that the child is subjected to no pain. This rule must be invariably your guide ; you can in this way in young subjects overcome the deformity, and if the splints are carefully applied, the little patient can walk with greater comfort and firmness with them than without them. Irons have been and are daily used ; I object to them, because you cannot keep up such uninterrupted support as you can with a webbing strap and splint, and without this, of course, all treatment is useless. It will occupy many months, which it is as well to inform the patients, or friends, as they will become impatient and dissatisfied. With regard to those who have been thus afflicted for years, when the bones are consolidated, it is a question if you should try or advise any treatment ; you must recollect the articular surfaces are not in fault ; therefore, if you straighten the leg at the expense of the articular surfaces, you cannot expect the patient to be enabled to manage without a support. We have had one patient in the Charity, above twenty-six years of age, who was determined to have something done, and who submitted with the prospect of wearing irons for life ; in this case I divided the semi-membranous and tendinous tendons, and straightened the legs about half, by means of the splint, which I adopt in knock-knee ; the splint being applied on the inner side of the leg. A great improvement in his appearance is the result, but not such as would have induced me to have submitted to the treatment, or advise its being done in similar cases.

ON FRACTURES OF THE FEMUR.

By W. LYON, Esq.

Lecturer on Surgery, and lately one of the Surgeons of the Glasgow Royal Infirmary.

[Continued from p. 346.]

(For the Medical Gazette.)

CASE IV.—*Fracture of cervix femoris, or trochanter—inversion of foot—mistake in diagnosis.*

J. M. æt. 71, Oct. 4, 1841.—This old man fell from a stair, and alighted on a pump ; but whether he received the shock over the point of injury is not stated.

It is noted in the journal, that he complained of pain at hip-joint, where there was considerable swelling and rigidity of muscles, with a prominence resembling the trochanter major, to be

felt on the dorsum ilii. The limb was shortened two inches : crepitation could not be detected by *extension and rotation*, and the toes were *inverted*.

The case had been supposed one of dislocation, and an attempt had been made, by the aid of the pulleys, to effect reduction.

At the visit next day the symptoms were unchanged, but considerable latitude of motion, capability of restoring the normal length of the limb by extension, and its immediate shortening, convinced us that fracture, and not dislocation, existed. The advanced age of the patient forbade retentive measures, and the limb being placed in the easiest position, fomentations were applied. Considerable pain and constitutional disturbance followed, which soon subsided, and he left the hospital in December, with the limb shortened and *everted*, but its functions rapidly returning. The inversion, and the absence of crepitation, were the only symptoms which could mislead in this case, and the capability of making considerable *abduction*, the extent of *general motion*, the restoration of the *healthy length* by extension, completely contra-indicated the conditions denoted by the two first symptoms, and should have prevented the erroneous diagnosis arrived at.

The extent of shortening, two inches, rendered it likely the fracture was external to the capsule, and that, therefore, union without shortening might be effected. Had the patient been young, middle aged, or slightly beyond the latter, an attempt to procure union without shortening would have been perfectly safe, and very probably successful. It is not so, however, in the aged, as I have oftener than once seen exemplified. This danger is generally acknowledged, but in several cases I have witnessed the pain after an accident of this kind to be so severe, and to be inducing and keeping up such an amount of excitement, as to incite to the application of the usual apparatus, with the view of keeping the injured and highly excited parts at rest. From this the worst effects arise : the patient is kept constantly resting on the same parts, and from the diminished power of the nervous and sanguineous systems consequent on old age, sloughing, or ulceration of the soft parts exposed to pressure—the nates and sacrum—are almost sure to occur. Constant pain,

restlessness, and irritation, are thus induced; the deepening and extending of the sores bring on hectic, with profuse perspiration and diarrhœa, and these, added to the disturbance occasioned by the local effects of the injury, soon prove fatal. It may be insisted, that the patient is not only as well able, but is better able, to shift his position with, than without the apparatus. Feasible as this may appear, it is not the case, and besides, he is much longer confined, not only to the bed, but to one position, when he has, than when he has not, the apparatus applied, and of course, ulceration, or sloughing, are in proportion more apt to be occasioned. Nor is retention by apparatus of so much importance as at first sight it may be supposed. When the fracture is partly within and partly without the capsule, or in the cervix external to the capsule, or through the trochanter major, osseous union is of course usually attainable in the young or middle aged.

In the aged, however, supposing it always possible to determine the exact seat of the fracture, the attempt to procure union, even in fractures external to the capsule, is replete with danger, and making it is the more reprehensible, that ossific union can be safely obtained without it, the only difference being, that the limb will be shorter than its fellow and somewhat weak; conditions, however, much to be regretted, the avoidance of which is not to be sought for, at the peril of life.

I am aware that the attempt to procure ossific union by the use of the common apparatus, in fractures apparently external to the capsule in those advanced in life, is advocated by high authorities*; but taught as I am, by experience, of its danger, I would not now, in patients above sixty, especially of weakly habit, emaciated, and to be treated in an hospital, upon any account undertake the serious responsibility. In more than one instance I have tried the practice; ulceration or sloughing have always supervened, the patients have died, and I have found the fractures extending through the trochanter. Better far, in truth our imperative duty, to place the limb, as was done in the subject whose case originated the present remarks, in

an easy, and as far as possible normal position, obviate pressing symptoms, permit such motion as the feelings of the patient demand; allow him to rise when able, and trust to the agglutination of the surrounding tissues, the apposition and union of the often broad surfaces of the fracture, a *safe* attempt to cure, and in general, a very serviceable, though abbreviated limb.

It may be urged that this was not a case of fracture through trochanter, or neck external to the capsule, and that union was not effected, the cure being accomplished by formation of a false joint, or rather by the absorption and rounding off of the surfaces at the fractured part, the weight of the body being sustained mainly on the capsule. The most careful examination after the cure convinced me that the fracture had occurred at the trochanter, and that osseous union existed.

The most positive sign of fracture—crepitation, was wanting in the subject of our remarks, and in my experience in similar cases I have frequently found it so.

When the shortening is so considerable that the one fractured surface is drawn past the other, of course crepitation cannot be elicited; but even when by extension they are brought opposite each other, and moved, this sound or feeling is not always observed, as the case detailed exemplified.

For this, various reasons may be given. When there has not been displacement, crepitation may be prevented by the unlacerated investments not permitting sufficient motion; or, it may likewise be prevented by much irregularity of the fractured surfaces, spiculæ from the one, projecting and locking into roughnesses or depressions in the other. From the latter state I have seen it impracticable to produce crepitation in fracture of the tibia, or to restore the proper direction of the foot, and much deformity and eversion thereby result. Or again, the surfaces may have broken smoothly, and crepitation be prevented by copious sanguineous extravasation: or a portion of muscle may slip in and keep separate the surfaces. We see, therefore, that the absence of crepitation does not indicate the absence of fracture; and recollecting that crepitation from thick or viscid secretions into or around an articulation is not unusual, neither

* Liston's Practical Surgery, p. 76.

is the presence of crepitation to be taken as an undoubted symptom that the bone has given way. It follows from this, and from the fact that the investments are sometimes unlacerated, and do not permit displacement, that there may be no shortening, no crepitation, no eversion, and yet the cervix or trochanter be fractured. We know, too, that when the hip-joint has been simply bruised, to prevent the pain arising from motion, or involuntarily from the effects of the injury, the surrounding muscles contract, and the head of the femur is drawn and kept up to the superior part of the acetabulum, causing the limb to appear shorter, thus simulating fracture; and, if conjoined with synovial crepitation, being peculiarly apt to mislead. We thus perceive that it may be difficult, if not impossible, always to distinguish bruise from fracture; and likewise that rude examination may convert a fracture without displacement into one with shortening of the member.

Not only, then, may there be fracture while there is no crepitation, and little or no shortening, but, as our case proves, the injury may exist while another symptom, *eversion*, is likewise wanting, and not only wanting, but the contrary condition—inversion, one of the symptoms of dislocation—may be present.

The fact of the occurrence of inversion being known, I am not sure that any practical advantage may be gained by attempting to account for the mode of its production, the more especially that it will be impossible to ascertain which of the various causes on which it is asserted to depend is present in any given case. I must, however, qualify this opinion by stating that as it is desirable to rectify the position of the foot if inverted, so are its causes important to be known, that we may be able safely to attempt its removal.

I believe that some of its causes have been demonstrated by inspection of the injured parts: others are only inferred from supposition or analogy. The state of the bone, the direction of the fracture, the shape of the fragments, the conditions of the investments, the action of particular muscles, the direction of the inflicting force, have been shewn or surmised.

We can suppose that the one fragment may be driven in, or locked in

another, so as to maintain inversion; that the investments intact anteriorly hold the fragments in contact, while being lacerated posteriorly, they permit separation and turning in of the foot; that the fracture running obliquely inwards and backwards, the rotators acting upon the internal extremity of the fragment, no longer fixed, will draw it backwards, and of course turn the toe in the opposite direction; that the same muscles, the external rotators, may, by pricking of the fragments, be excited to increased action, and, acting on the shaft unattached to the cervix, will likewise turn the toe inwards; or, that, independent of any of those conditions, on producing some of them, the violence inflicting the injury may be so applied as to turn the trochanter forwards, and consequently the great toe inwards. In whatever way the inversion be accounted for, we believe, as we found to happen, that it will, by the weight of the limb, or the restored balance of muscular action, generally merge into the opposite condition of eversion, with which state of foot our patient was discharged.

Nevertheless, of the absence of crepitation and of shortening, if inversion existed after an injury of the hip-joint, seeing that it occasionally exists in fracture, and not in any other kind of injury, with exception of several species of dislocation, in which there is always shortening, we would, if it were present in those circumstances, have tolerably strong reasons to believe that it depended on fracture.

There is a symptom of fracture not yet mentioned, the comparative segment of a circle in which the trochanter of the injured side rotates, which can always be observed when shortening is present, and occasionally when it is absent: we have almost always been able to detect a marked difference between the rotation of the trochanter on the injured and opposite sides, a difference not only showing the non-existence of dislocation, in which the trochanter cannot be made to revolve, but in many cases unequivocally establishing, even although the general signs are absent, that fracture has been suffered; to decide, however, by this sign on the exact point of the cervix, reckoning the trochanter as part of it, in which the fracture is

situated, cannot, we fear, be done with a very close approximation to exactitude.

With all the difficulties arising from the absence of one or more of the usual symptoms, or the presence of any of those contra-indicating, it is seldom they are all combined in one case; and it must be rare indeed, where there is any displacement, that the skilful and careful practitioner cannot distinguish the easily, though painfully, moved, the abbreviated, but readily extended, limb, and rotated fractured cervix or trochanter, from the dislocated member—rigid, confined in its motions, and incapable of rotation or extension but with the employment of much force.

The diagnosis of severe bruise from fracture without displacement is difficult in all, is impracticable in many cases. The possibility of converting, by rude examination, fracture without displacement into fracture with displacement, should be kept in recollection: and as shortening, though absent at first, sometimes shows itself after a few days, a case dubious one day may be evident enough soon after; points which may give rise to disagreeable difference of opinion between one practitioner and another, and between the surgeon and his patient.

Not only does the female less often suffer from fracture of the femur than the male, we having only had six in the former, while we had thirty-five in the latter, but our cases strongly show the well known-fact, that when fracture of the femur does occur in the female, it is generally in the cervix or trochanter, for out of our six examples in the female there were five of the trochanter or cervix; while in thirty-five males there were only two with the fractures at those parts.

There was reason to believe that all of them were external to the capsule; two of them were, by dissection, shown to be through the trochanter major. With one exception, the patients were above sixty years old. In three of these, retentive means were used: one died from an old diarrhoea, aggravated by sloughing; another from constitutional irritation and sloughing; and in a third the retentive means were interrupted on account of incipient sloughing. In one under fifty, union without shortening was effected

by the usual apparatus; and in another of sixty-five, the limb was supported in an easy position by pillows, and fomentations applied. She was allowed to shift when inclined, and in a few weeks left the hospital with the fracture united, and with the limb, though shortened, rapidly gaining strength: thus corroborating, when contrasted with some of the other cases, the propriety of not employing retentive means in patients of advanced age, even though the fracture be evidently external to the capsule, the more especially as without them ossification and a useful limb can be quickly and safely obtained.

CASE V. — Fracture of shaft of femur — sloughing — death. Post-mortem appearances.

June 30th, 1842. W. M.K. æt. 77. Five days ago fell out of bed, and fractured femur at junction of middle with upper third, where soft parts are swollen and tense. Patient has paralysis agitans, is very feeble, and has irregularity of pulse.

The limb was treated by Desault's plan, modified as formerly described: general health of patient was attended to; he was allowed generous diet, and, after a short while, four ounces of whiskey daily.

The skin over sacrum soon began to give way, and by Aug. 9th, at which time motion at seat of fracture was still perceptible, and in opposition to stimulants of various kinds, and the constant use of air or hair pillows, the sore had become four inches in diameter, and exposed the bone. The health now became much disturbed, the appetite failed, exhaustion rapidly advanced, and he died on the 11th of August, about six weeks after admission.

The soft tissues around fracture were found thickened, infiltrated, vascular, and with a few osseous particles interspersed. This was the only medium by which the fragments of the unusually thick and brittle femur were united.

No internal morbid appearances were discovered.

The symptoms, and the absence of any morbid appearance, excepting the large bad sore, entitle us to conclude that this patient died from the irritation

and exhaustion occasioned by the large, painful, ulcerating surface; and the constant confinement in one position necessitated by the splint and bandage, having been the cause of the ulcer, it becomes important to decide whether, in weak persons of advanced age, it is advisable, in fractures of the shaft of the femur, to follow the ordinary treatment for that injury.

It must be allowed that this patient was rather an unfavourable specimen of a person at the age 77; and it may be urged that it is unreasonable to draw a general rule from a single case, and that one, too, of a more unfavourable kind than most of those of a similar description.

With the exceptions mentioned, the patient looked healthy on admission, and took his substantial fare and allowance of whiskey with relish; and, seeing how trying are the effects of long-continued confinement to bed, apart from disease, on the young and robust, the diminished capability of resistance of the old and frail, the observance of the effects of pressure at advanced periods of life in fractures near the hip-joint, and the fatal result in this instance, I certainly, in a like example, would either adopt different treatment from the commencement, or more carefully watch, and, if requisite, interrupt the kind of procedure which I employed.

There is even a risk from the temporary use of the ordinary treatment; for if it has been used so long as to induce sloughing, the confinement will likewise have much debilitated the patient, and from the effects of these, and the pain in the injured part from motion, it will be found difficult afterwards, if not impracticable, to enable him to take exercise, or to make and support any change of position from that of reclinaton on the back, which the body will invariably assume from the influence of gravity, and therefore the sloughing will extend, though the splints, &c. have been removed. For these reasons it is desirable, if not essential, that from the commencement the treatment shall be such as will allow frequent change in the position of the body, while immobility in the seat of fracture is maintained. It will not be easy to combine these requisites in a perfectly effectual manner, nor in such way as to preserve

the length and contour of the limb, especially if the fracture be oblique; but activity and power are not to be expected in the very old and infirm, in whom only I advocate a departure from the ordinary treatment in fracture of the shaft of the femur; and, however valuable activity and power are, they ought to yield to considerations involving the safety of life, which, I feel assured, will be frequently sacrificed by adherence to the usual procedure.

It is improbable that the patient will be able, in a case of this kind, to rise in a few days after the injury, as in fracture within the capsule, where, besides, the object wished is formation of a new joint, while in this it is especially sought to be avoided. Nor will there be the same likelihood of ossific union here if the patient be made to rise early, without means to prevent motion, as there is in fracture through the trochanter major, where the fractured surfaces are broad and often rough. Though apparatus of any kind be dispensed with, we doubt if a very old and infirm patient with fracture of the shaft would resist the exhausting effects of confinement to bed, shift his position as often as to prevent bed-sores, and that at same time union would occur.

With the ordinary apparatus, the patient cannot move sufficiently while in bed; and out of it all attempts at taking exercise are debarred.

We want a method possessing immobility and lightness, and the only plan by which these are attainable is in the employment of the leathern splint and starched bandage, as applied in morbus coxarius. And were I again to meet with a fractured femur in a person on the verge of 80, I would fit a piece of undressed leather, of length sufficient to extend from a little above pelvis to the feet, broad enough to cover a third of the hip and limb, and of shape corresponding to the member when slightly flexed. This being softened by water, I would cover with a thin layer of carded cotton, or two or three pieces of cotton cloth, and secure with gentle firmness to the body and limb by starched bandage. Being dried, it would form a firm, tight mould for the limb, and I would permit and urge the patient to change of position in the bed, to rise from it as early as possible,

and take exercise with the aid of crutches.

In this manner his health would be preserved, sloughing be prevented, and union likely ensured.

There might be deformity, or even non-union, but even the latter is a slight evil when compared to the risks of confinement, which, in such circumstances, should never, in my opinion, be encountered.

A CASE OF TUBERCULOUS EXCAVATION OF THE LEFT LUNG,

TREATED BY PERFORATION OF THE CAVITY
THROUGH THE WALLS OF THE CHEST.

By JOHN HASTINGS, M.D.

And ROBERT STORKS, Esq., Surgeon.

(*For the Medical Gazette.*)

E. G., a clerk, ætat. 38, remarkably intelligent, of a nervous sanguineous temperament, and born of healthy parents. Had always enjoyed good health until the last four years, when he suffered from a nervous fever, accompanied by an affection of the heart, from which he was many months recovering. Whilst in Ireland in the summer of 1841, he was attacked with severe cough, hæmoptysis, and expectoration, which he believed originated in cold; great debility ensued, and although the cough and expectoration diminished, he never regained his strength. In the spring of last year hoarseness, loss of voice, cough, expectoration, and extreme weakness came on, apparently through severe cold; this was shortly followed by an attack of typhus, which confined him to bed for nine weeks. On recovering from the fever, the cough and expectoration had increased, and from the debility which followed, he was compelled to take to bed for the winter. On the 10th of February, Mr. Whidborne, a surgeon in Queen Square, was called in, who put the patient under a course of the naphtha treatment; from which he benefitted so much, that in six weeks he was able to take exercise out of doors. By the advice of some of his friends, he became an inmate of the Hospital for Consumption at Chelsea; but as he did not improve, after a sojourn of three weeks he returned to his home.

On the 10th of August, by the advice of Mr. Whidborne, he consulted me. His cough was troublesome, and often occasioned pain in different parts of the chest. His expectoration, streaked with blood, and of a puriform character, amounted from two ounces to half a pint daily; dyspnœa was considerable, appetite tolerable, and bowels regular. Expansion was deficient over the left clavicular region, where percussion yielded a dull sound. An extensive blowing murmur, with here and there a gurgling râle, and pectoriloquy, were well-marked. Over the same region, on the right side, the vocal resonance amounted to bronchophony; the respiratory murmur was more or less bronchial; the sound on percussion, although it had not the clearness emitted by a healthy lung, was not very dull, and expansion was natural. His pulse were 132, respirations, 32; height, 5 ft. 6½ in.; weight, 7 st. 8½ lb.; and he expelled 122 cubic inches of air from his lungs, by a forcible expiration, as shewn by Hutchinson's breathmeter. The naphtha treatment was ordered to be continued, with generous diet. From this time he continued slowly to improve, up to the beginning of November, with the exception that he was thrown back by five attacks of inter-current pleurisy, when blisters and a lowering treatment were had recourse to, and the naphtha and nourishing diet suspended. His pulse were 108; his weight had augmented to 7 st. 11 lb. The physical condition of the right lung had undergone improvement, but the cavity in the left had decidedly increased. As I saw no prospect of closing the cavity by medical treatment, and consequently no hope of his becoming much better than he then was, I determined to propose the operation of making an incision into the cavern through the walls of the chest, to which he at once assented. I had previously explained that it was not an experiment, for Dr. Barry,* of Dublin, had more than a century ago recommended a somewhat similar operation; and at a subsequent period, in a work on Indigestion,† he published several cases where its use had been attended with complete suc-

* E. Barry, M.D. A Treatise on a Consumption of the Lungs. Dublin, 1726. Pp. 217.

† E. Barry, M.D. A Treatise on Three different Digestions, &c. London, 1763. Pp. 366.

cess. Its disuse has probably been owing to the want of the stethoscope; for without auscultation, the existence and situation of a cavity in the lung cannot be satisfactorily demonstrated. We find Dr. Barry directing the operator to the situation of the cavern, by the seat of previous pain, by augmented temperature over the space it occupies, and by the *elevation* of the ribs. With such limited knowledge, nay inaccurate data, it is surprising that any surgeon could be persuaded to perform the operation. It will not be difficult to believe that serious and fatal errors occurred in consequence, which soon put an end to the operation, which may possibly turn out to be one of the most important we are at present acquainted with. Dr. Barry has reported a case which terminated fatally, where the surgeon had not reached the cavity by an inch and a half. In this instance pleurisy and effusion probably caused the death of the patient; but now, with the aid of the stethoscope, no such disastrous results are likely to occur. I may here observe, that for a considerable period I had come to the conclusion, that the great difficulty of curing phthisis in its latter stage, arises not so much from any obstacle that the nature of the disease offers to the healing process, as to the distension and contraction which the sides of the cavity continually undergo from respiration. The idea of overcoming the difficulty by an operation, such as has been employed in the following case, did not occur to me until I met with the invaluable facts and observations of Dr. Barry. To my mind they confirmed, in a great degree, the views just stated, and I determined the first opportunity to attempt the arrest of the disease by this method. The primary object Dr. Barry had in view was the discharge of the fluid within the cavity; the removal of the cause of the secretion was my aim. No one can doubt that these cavities owe their origin, in the first instance, to the ripening of tubercles; but their persistence and augmentation result, I believe, as before stated, from the distending and irritating effects of the air within the cavity. Hence the object was to remove this, which appeared to me might be effectually done, were a tube of sufficient calibre passed into the cavity, that would admit the escape of air as

fast as it entered; so that a state of repose being secured, the walls of the cavity would be in a much more favourable condition for uniting. It is reported that an operation of this nature has been lately performed in Germany; and Dr. Hocken* observes, "I may remark, that the operation recently proposed, of making a free external communication through the walls of the chest with a phthisical cavity of large size, replete with morbid secretions, is (if it could be effected safely) likely to render the case more curable, provided the extent of disease present, and the predisposition of the patient, allow the smallest shadow of hope to remain."

Nov. 15th.—Having previously consulted my friends, Drs. Hocken, Burslem, and Mr. Storks, on the case, the latter undertook the operation; and we accordingly proceeded to the patient's house for that purpose at half-past one. He was in good spirits; the cough was troublesome; the puriform expectoration amounted to three ounces, which had been discharged during the morning; the pulse were 120. After carefully auscultating the left clavicular region, it appeared to me that the walls of the cavern were thinnest between the third and fourth ribs, about an inch and a half from the sternum, where Mr. Storks decided on making the opening. The operation is detailed by Mr. Storks at the conclusion of my history of the case. Shortly after the opening was made into the excavation through the walls of the chest, the pulse sank to 100, and the cough, expectoration, and dyspnœa ceased. A little faintness occurred during the operation, which was removed by a few tea-spoonfuls of brandy and water. The blowing murmur and pectoriloquy had undergone a diminution in intensity. Quiet, and antiphlogistic regimen, were enjoined. At 7 P.M. the air was passing out of the wound freely. He complained of pain between its orifice and the shoulder, with numbness of the left arm. The pulse were 96; he had neither cough, expectoration, nor difficulty of breathing. He had been a little faint, which yielded to a small quantity of brandy and water. A composing draught was

* A Practical Inquiry into the Value of Medicinal Naphtha in Tubercular Phthisis, By E. O. Hocken, M.D. Higley, 1844. Pp. 60.

ordered in the event of restlessness during the night.

16th, 7 A.M.—As he had been uneasy in the early part of the night, the draught was administered, which procured six hours' refreshing sleep; he was free from cough, dyspnœa, and pain; the pulse 68. He had brought up several times a little frothy mucus mixed with blood; a little bloody discharge oozed from the wound, which looked healthy.

9 P.M.—The pulse were 80. The orifice of the wound appeared to be closed, as no air could be detected passing in or out; notwithstanding which he was free from cough, expectation, and dyspnœa.

17th, 8 A.M.—He had passed a good night, and towards the morning had felt a little difficulty of breathing, followed by slight cough; the discharge being bloody frothy sputa. As the mouth of the wound seemed still closed, a little lint was pushed through the slight adhesions into the cavity.

5 P.M.—He had a slight fit of coughing at three o'clock, which ended in a little expectoration of frothy bloody mucus; the pulse 88. The lint was removed by Mr. Storks, and a piece of elastic gum tube inserted into the cavity.

18th, 8 A.M.—Last evening he took an aperient, which had operated in the early part of the night; and as he was restless afterwards, he took a composing draught, which procured him an excellent night; he had neither cough, expectoration, nor difficulty of breathing; the pulse were 80. He was ordered half a pint of beef-tea twice a-day.

19th, 8 A.M.—He had a slight fit of coughing in the night; no expectoration; the pulse 76; the respirations 24. As no air could be detected passing in or out of the tube, Mr. Storks restored the connection between the orifice of the wound and the superior part of the cavity. He was ordered mutton chop and a glass of ale for his dinner.

9 P.M.—The pulse were 76; he was entirely free from cough and expectation; a little brown-coloured discharge flowed out of the tube. He had taken ten minims of Nap. Rect. in a table spoonful of distilled water, which was ordered to be repeated twice a-day.

20th, 8 A.M.—He had had seven hours of undisturbed sleep. He was

free from cough, difficulty of breathing, and pain. On waking he had expectorated a little frothy mucus. A feather exhibited very distinct movements on being placed at the mouth of the tube. The pulse were 72; the respirations 22. The bowels were confined.

9 P.M.—About twenty minutes after he had partaken of his chop and ale, which he had eaten with an excellent appetite, the whole surface of the body was chilled; rigors succeeded, followed by fever, vomiting, and great pain in the head. The skin was hot and dry; there was great thirst, with spasmodic twitches in the wound; the pulse were 112, but the pectoral symptoms had undergone no change. The aperient ordered in the morning had not been taken until seven o'clock in the evening, and had not acted. It was ordered to be repeated should the first fail to relieve the bowels by midnight. A table-spoonful of the following mixture was also ordered every four hours:—

℞ Creosot. gtt. xxi. ; Aq. Destill. ℥vj. M. fiat misturæ.

21st, 8 A.M.—The bowels had acted twice with the aid of the second aperient, the sickness had ceased, and the pain in the head and heat of skin had diminished. The pulse were 96. He was free from cough, expectation, and dyspnœa.

9 P.M.—The pulse were 88, and the symptoms of gastric disturbance were rapidly disappearing.

22d, 8 A.M.—The pulse were 68; the respirations 24. He had neither cough, expectation, nor difficulty of breathing. A little boiled mutton was ordered for his dinner.

23d, 8 A.M.—The pulse were 74. In the early part of the night the tube had become displaced, and touched the opposite side of the cavity, which produced a sickening heavy pain. On being restored to its former situation, he slept the remainder of the night comfortably, and was free from all pectoral disturbance. He was ordered to recommence the naphtha mixture, and take a little sherry and water with his dinner.

24th, 8 A.M.—The pulse were 76. He had coughed a little upon waking in the morning, and had expectorated about half a table-spoonful of frothy mucus, mixed with a little purulent discharge. He attributed the cough to

his head having slipped off the pillow during the night.

9 P.M.—He had about half-past one, after a long nap with his head very low, a severe attack of cough and difficulty of breathing, with great pain in and around the wound. As Dr. Hocken lived much nearer the residence of the invalid than myself, and had very kindly promised to supply my place in the event of emergency, he was immediately sent for. On arriving he withdrew the tube, which was followed by the escape of about a tea-spoonful of healthy-looking pus; this afforded great relief to the dyspnœa. The irritating cough had been nearly subdued by an anodyne, and expectorating mixture, prescribed by Dr. Hocken, which was ordered to be continued. Whilst the cough continued, frothy sputa to the amount of an ounce was expectorated. The headache was severe; the pulse 100. The naphtha mixture and wine were withheld, and his head and chest maintained in a raised position. Cold lotions were ordered to the head.

25th, 8 A.M.—The pulse were 88; the respirations 28. He had passed a tolerable night, with slight cough, and trifling expectoration of frothy mucus.

26th, 8 A.M.—The cough and expectoration had diminished. He had slept at intervals during the night. The pulse were 100.

9 P.M.—He was generally more comfortable than in the morning; he attributed this to his being able to keep an erect position by the aid of one of Daw's patent chairs. The pulse were 112; skin hot; tongue moist.

27th, 8 A.M.—The pulse were 96. He was very languid; had passed a tolerable night, with slight cough, and expectoration of a brown tenacious mucus, blended with sputa of a purulent character. The appetite was deficient, and he complained of pain in and around the wound. The tube was removed, as it was suspected it might be the cause of the pain.

4 P.M.—The cough was troublesome, accompanied with difficulty of breathing and great languor; the pulse were 100; the skin hot; with a total loss of appetite.

28th, 8 A.M.—The pulse were 84; the cough and expectoration were less; the purulent character of the latter had almost disappeared; the bowels were open. Ten minims of Nap. Rect. were

added to each dose of the mixture, and wine, beef-tea, and animal jelly, were directed to be given.

29th, 8 A.M.—The pulse were 92; the respirations 28; the tongue clean, and the skin moist. He complained of headache, which he had suffered from more or less since the 24th, nausea, and occasional shooting pains. He had had snatches of sleep during the night, his spirits were good, and he felt stronger than he did the day before; the expectoration, which amounted to about an ounce, was chiefly of a mucous character, and of a brown flesh colour. He had taken nourishment two or three times during the night.

[For the report of the condition of the patient during the next two days, and also Dec. the 3d and 4th, I am indebted to my friend Dr. Hocken, in consequence of my unavoidable absence from town, to whom both Mr. Storks and myself feel highly indebted for his kind assistance, and entire concurrence in the treatment which has been adopted in this case.]

30th, 9 P.M.—Appearance much improved; feels much better and stronger; is quite free from headache, except from exertion, or from moving suddenly. Chest and wound comfortable, and free from pain; pulse stronger than in the morning, 92—soft; respirations 24. Has had little difficulty of breathing or cough all day, and did not expectorate anything till one o'clock P.M. Since then has spat up about half an ounce of a transparent, tenacious, frothy mucus, mixed with saliva; some few sputa, very slightly streaked with scarlet blood. Has eaten some animal food (rabbit), &c. with appetite. No fever.

Dec. 1st.—Had passed on the whole a good night; sleep having been several times disturbed by dreams, and pain in the back of the head. On first waking suffered much from headache; but it has gradually decreased, and is at present trifling. Had no expectoration till about two o'clock A.M., since which he has spit up about one ounce of tenacious rusty-looking mucus; some sputa streaked with florid blood. The tongue clean and moist. Bowels moved; stool liquid, healthy coloured. No undue heat of skin: pulse 74; respirations 26. The tube has given no uneasiness, and air escapes with a whist-

ling noise from coughing. His appetite for food has returned.

2 P.M.—Has felt comfortable since morning, and completely lost headache; pulse 80. Wound healing rapidly; tube adherent, bringing away a portion of granulations (evidently from the cavity) between the openings of the tube. Air freely escapes through the wound and tube on the slightest cough or effort. There has been little or no cough, difficulty of breathing, nor expectoration, since the morning. Two or three mucous sputa, transparent, and mixed with air-bubbles, being all that was coughed up. Evening.—Very comfortable; good appetite; pulse 82; has had no expectoration, and little cough.

2d, half-past 8 A.M.—Has passed an exceedingly comfortable and tranquil night (the best night he has passed for some time), and has been perfectly free from headache, or pain in any part. Had no expectoration till about two o'clock A.M., since which he has spit up about half an ounce of a tenacious mucus, without much cough or effort. The sputa are nearly free from air-bubbles, rusty-coloured, some almost of a fleshy aspect, and one with a streak of florid blood. His countenance is expressive of strength, and is quite free from anxiety; lips moist. Air freely escapes through the tube on coughing, or even on retaining the breath, with a hissing noise. He was at breakfast, and eating with appetite, sitting up with apparent ease in the chair. He states that his pulse were about 70 till he commenced his meal; they are now 90; respirations 28.

9 P.M.—The expression of the patient's countenance is highly favourable; and he states that he is conscious of an acquisition of health and strength. During the day he has been perfectly free from headache and uneasiness, and has partaken of food with a good appetite. There has been but little cough, and no difficulty of breathing, except when the sputa were about to be expectorated. The expectorated matters amount to about half an ounce, and consist chiefly of transparent frothy mucus, mixed with some more tenacious sputa, of a brownish colour. Air continues to escape freely through the tube on every effort. The skin is soft, moist, and of a comfortable temperature; lips moist; no thirst. Pulse 80; respirations 24.

3d, 8 A.M.—The pulse were 88; the respirations 20. Air had passed freely out at the orifice of the wound at every inspiration; he was very comfortable; had slept eight hours without cough, and had very little expectoration; the appetite was much improved; the bowels confined. He felt satisfied he was gaining both flesh and strength. An enema was ordered.

8 P.M.—Has passed a very comfortable day, and is conscious of an increase of strength. Thinks that instead of any increase of emaciation (which was the case for the first fortnight after the operation,) he has visibly gained flesh during the last few days. His appetite and digestion are now excellent, and he has been free from any pain or uneasiness. During the day there has been but little cough, and no difficulty of breathing, except when mucus was about to be expectorated. Sputa amount to about half an ounce, chiefly of clear, transparent, mucus, mixed with a few of greater consistence, of a salmon tint. Pulse rather small, moderately strong, and 88; respirations 20. Wound healing most favourably; air passes very freely through the tube. Tube adherent; when withdrawn, removed a long portion of granulations from the cavity. Bowels have not been moved; tongue clean and moist. To use an enema of water gruel, with chloride of sodium.

4th, 8 A.M.—Has passed a very good night, having had about seven hours of refreshing nearly undisturbed sleep. Bowels moved spontaneously, without the use of the injection; stool healthy. Has had but very trifling cough during the night, and has expectorated rather more than half an ounce of a tenacious mucus (the chief part having a fleshy aspect), without difficulty. Air freely escapes from the wound, Pulse 92; respirations 20.

5th, 8 A.M.—He has had an excellent night, without cough or expectoration. On waking had a little uneasiness about the wound, which apparently arose from the tube becoming blocked up with secretion, thereby preventing the free passage of air through the orifice. He had on waking expectorated two or three pieces of tenacious flesh-coloured mucus, similar to that which had been brought up during the last eight days. He complained of nausea after taking his medicine, in conse-

quence of which the *Liq. Op. Sed.*, *Vin. Ipecac.*, and *Mucil. Acac.* were removed from the mixture. He felt stronger; the pulse were 80, and the respirations 16.

6th, 8 A.M.—The pulse were 88; the respirations 16. He had slept well throughout the night, his appetite was excellent, his bowels were open, the cough was very slight, and the expectoration for the last twenty-four hours amounted to not more than a teaspoonful, and was of a semitransparent mucous character.

7th, 8 A.M.—He had passed a good night; the cough was slight; he had discharged about half a table-spoonful of mucus, blended with a few sputa of a flesh colour. His appetite was excellent; his pulse were 90; and the respirations 16. Air continued to pass freely through the tube.

8th, 8 A.M.—He had passed the night in bed for the first time since he had used Daw's chair. Towards morning he complained of cold, and cold perspirations, with great irritation in the stomach and bowels; the latter had been disturbed twice with unhealthy evacuations. He had a troublesome hacking cough, without expectoration, and headache; the pulse 88; the respirations 28. During the night there was a free discharge of thin pus from the wound, through which the air passed freely. He attributed this unfavourable change to a beef-steak he had eaten the previous day for his dinner.

3 P.M.—The following powder was ordered to be taken immediately, and his usual aperient two hours afterwards:—

R Hyd. cum Cretâ, gr. iij.; Pulv. Ipecac.
Co. gr. v. M.

9th, 8 A.M.—The abdominal disturbance subsided after the aperient had acted. He had passed a tolerable night in Daw's chair, which he preferred to the bed. The irritating cough had considerably abated; the pulse 92; the respirations 20.

10th, 8 A.M.—He had had an excellent night, with very little cough or expectoration; the pulse 88; the respirations 18; the appetite good. He was cheerful, and felt stronger. The depressions about the left clavicular region appeared less marked than they

had been. The physical signs about the cavity had undergone no particular change since the last examination. The respiratory murmur in the inferior portions of the left lung was in some places healthy, and in others bronchial, without any marked vocal resonance.

11th, 8 A.M.—He was steadily improving; the pulse were 90; the respirations were 18.

12th, 8 A.M.—He was daily growing stronger. He had no cough during the night. The pulse 80; the respirations 16 to 18. The bowels were confined. An aperient was ordered.

13th, 8 A.M.—He was remarkably well and cheerful; he had no cough during the night, and very little in the day. The pulse 80; the respirations 24. The depressions about the left clavicular region had become more evident.

14th, 8 A.M.—He had passed eight hours of undisturbed sleep. The expectoration for several days past had been chiefly of a mucous character, with an occasional sputum of a brown colour; the whole did not exceed a half drachm to a drachm in the twenty-four hours,—certainly less than many persons expectorate in health.

15th, 3 P.M.—Has had a most comfortable night; pulse 88; respirations 16. Bowels not relieved to-day; has expectorated a very small quantity of transparent mucus, with one brownish sputum; appetite excellent. Has been walking about the room.

The operation performed upon E. G., the individual whose case is recorded above, will not perhaps be thought devoid of interest; and although the proceeding is simple and easy of performance, still those who have had no experience in the operation or its effects, and who may be induced by the perusal of this case to test its advantages, will not consider even the minute details of such a proceeding unimportant.

As it is quite unnecessary, after the report my friend Dr. Hastings has drawn up of the case, for me to make any observations upon the facts that induced us to try the effect of making a communication between the walls of the chest and a tuberculous cavity, I shall at once proceed to detail the steps

of the operation, making such remarks as they may require, but at the same time confining myself strictly to those questions likely to affect the surgical treatment of this fatal disease.

On Friday, Nov. 15, 1844, in the presence of Drs. Hastings, Hocken, Burslem, and Messrs. Whidborne, Douglas, Bayliss, Ion, Coward, and Bowes, E. G. was laid in the recumbent position. An incision, two inches in length, being made at right angles with the left clavicle, in a line with the nipple, which, if prolonged, would have divided it (the nipple) in the centre, the fibres of the pectoralis major were exposed, and divided to a similar extent. The third intercostal space being thus laid bare, a fine hydrocele trocar was thrust into the cavity; and having ascertained to my own satisfaction that air issued from the canula, a scalpel was pushed through the intercostal muscles, nearly in the centre of the space, and carried obliquely upwards into the cavern. A probe being passed along its blade, it was withdrawn, and I was thus enabled to ascertain most satisfactorily that I had penetrated the excavation, the walls of which, as I divided it to the extent of an inch with a probe-pointed bistoury, I found to be extremely dense—indeed, almost cartilaginous. The direction of the second incision was in a line with the ribs, being nearly at right angles with the first incision, there being sufficient space, in consequence of the retraction of the cut fibres of the pectoralis major, for me to make this second incision without again interfering with the integuments. Air and blood immediately escaped from the aperture; and on again introducing the probe, I was unable to move it with the same freedom as when introduced at the small puncture previously referred to. At this moment the patient was seized with a fit of coughing, and brought up two or three drachms of blood, which had escaped into the cavity.

I now endeavoured to introduce a silver tube, made under my directions by Mr. Weiss, which not answering the purpose well, I removed; and as the air was escaping freely, I had him carried to bed, and warm water dressing applied around the wound. On the third day after the operation, a piece of elastic gum catheter was introduced, which has been worn ever since, and

found to answer the purpose better than any other kind of tube.

As it is more particularly my province to describe the best mode of proceeding, as far as my limited experience goes, to effect our object, I do not hesitate to say, from the knowledge I on that occasion obtained, and from the method I have since pursued in the case of a lady to whom I was called by Dr. Hastings, that the proceeding described above was unnecessarily painful and tedious. I may as well here briefly describe what I believe, from the experience of my last case, to be the best method of performing this operation. It being decided in which intercostal space the opening is to be made, an incision nearly two inches long should be made with a narrow straight bistoury along the upper border of the inferior rib of that space down to the intercostal muscles; the instrument should at once be cautiously pushed into the cavity, the consequences carefully observed; and should nothing forbid, the incision should be prolonged to the extent of an inch and more.

Should there be any hæmorrhage from any vessel external to the chest, it can readily be commanded by a ligature applied before the excavation is opened. Should there be any oozing from the cut wall of the cavern, the tube will, by its pressure, I believe, as far as my experience goes, command it. In the case of the lady on whom I have recently operated, there was some oozing, which was readily subdued by the tube and the application of cold.

The reasons that induced me to adopt the form of incision described in the first case was, that had I made the incision in the direction of the fibres of the pectoralis major, I feared much annoyance might be produced by the action or spasm of that muscle. I therefore determined to paralyse that portion of the muscle implicated in the operation by the transverse division of its fibres. That this may be of service in stout muscular subjects I do not doubt, but the surgeon will rarely be called upon to perform this operation when the muscular system is in that condition. The simple proceeding adopted in the last case will, in the majority of instances, be found quite sufficient, occupying as it does a few seconds only; it is, as far as the pain of an ope-

ration is concerned, not calculated to cause more suffering than the infliction of a wound necessary to evacuate the contents of a small abscess. After the incision is made, a piece of a full-sized elastic gum catheter is to be introduced along the wound into the cavern, and retained in its position by a piece of ligature tied round the end (which should project a quarter of an inch beyond the external wound), and the ligatures should be secured by strapping. An ivory cap, similar to the accompanying



engraving, should be applied on the mouth of the tube, with a piece of warm sponge placed in its interior; this serves a double object, warming the air that enters through the aperture, and absorbing any discharge issuing from the wound. This, of course, should be frequently changed, and the cap may be easily secured by a strip of oiled silk passing through the little bands at the side, the ends of which may be fastened to the adjoining integument by a piece of plaster.

The most important point to ascertain, if possible, before such an operation is determined on, is whether the pleuræ costalis and pulmonalis adhere; this, in almost all the cases to which this operation is applicable, will be found to be the case; Louis, on this point, going so far as to say, "If there were no adhesions, neither were there large or medium-sized excavations; generally speaking, indeed, there were none of any kind."—Walsh, Translation, p. 36. All will agree, who have had any experience upon this subject, in the truth of this observation; at the same time, the surgeon cannot divest his mind of the possibility of his opening the pleura, and thus creating pneumothorax. It would undoubtedly, therefore, in relation to this operation, be most important for us to be able accurately to diagnose the presence of adhesions; and it has struck me that the presence of that expansion during

inspiration, and corresponding depression during expiration of the intercostal space over a tuberculous cavity, which is often seen, cannot take place without adhesion of the pleural surfaces. It requires further experience, of course, to determine this point, but I think the suggestion worthy of consideration. Although this operation is not of recent date, it is revived under very different circumstances. The invaluable assistance to be derived from the stethoscope in affections of the lung was unknown to Dr. Barry; we cannot, therefore, be surprised at finding an operation calculated to give, to say the least of it, great relief, falling into disuse, when the surgeon had nothing to guide him to the seat of the disease but pain and increase of temperature.

The further details of this case will be given in a future number.

MEDICAL GAZETTE.

Friday, December 20, 1844.

"Licet omnibus, licet etiam mihi, dignitatem
Artis Medicæ tueri; potestas modo veniendi in
publicum sit, dicendi periculum non recuso."

CICERO.

THE DILEMMA, AND REMEDY THE THIRD.

THE PRACTITIONER OF MEDICINE LICENSED
BY A GOVERNMENT BOARD, INDEPENDENT
OF UNIVERSITIES, ROYAL COLLEGES
OF PHYSICIANS AND SURGEONS, AND
APOTHECARIES' HALLS.

THE point of highest moment to the community in any legislative enactment touching the medical profession, is unquestionably the QUALIFICATION OF THE MEMBER OF THAT PROFESSION. How the Colleges or Corporations with which the profession is associated are to be administered, matters little to the world at large: whether all, or only a few, are to have a voice in the administration of their affairs, or in the choice of the officers and council by which these affairs are administered—whether there is to be one grade or several grades, &c.—all this is of secondary moment. The competency of the men who are

entrusted with the public health is the paramount consideration; and the question then resolves itself into very simple elements: shall the public, and the Government of the country as guardians of the public, be content with moderate competency, with men having a minimum of education; or shall they insist on such competency in the medical advisers of the community as the most careful education, preliminary and special, can alone bestow? Surely there is but one way in which this question, or these questions, can be answered. The community are interested in an infinitely greater degree in a respectable and competent body of medical advisers, than in any other class of functionaries whatsoever. The medical man is now the head and front of every measure having the social welfare and progress for its object. Under his eye disease has long been on the decrease, and it is certain that the causes of disease and early death which are readily remediable are still as legion in comparison with those that have been abated or removed. They will be overcome,—they can *only* be overcome through the ceaseless intercession of enlightened medical men with governors and persons of rank and influence in the commonwealth, who are in general utterly ignorant of the state and requirements of the poor. The medical man and the good priest are the only two members of the educated classes who ever meet in the abodes of sickness, wretchedness, and poverty, and who are in any way competent to advise with a true and not a mock executive upon the means of removing the huge amount of physical and then of moralevil under which the poorer classes lie whelmed.

The *spiritual*, the *moral*, Government has already taken under its special protection through the means of its amply endowed church; shall not government feel it equally a duty to take the *phy-*

sical under its especial protection? And if so,—and we apprehend there can be but one answer to this query,—how is it to discharge itself of this important duty most efficiently? By taking measures to secure to the community a body of highly educated medical men, and by trusting their examination as to competency with no private and irresponsible board; but by assuming the duty of examining members of the medical profession into its own hands, through a public and responsible board, composed of men who by common consent are themselves competent to the difficult office of examiners; who would at all times act under the general eye, and who would have no interest save to discharge their duty faithfully to the community.

We do seriously believe that the government of a country in these times is as imperatively required to provide a succession of fully qualified medical men for the service of the public, as it is to secure impartial judges for the due administration of the laws. The plan by which we think this important object would be best attained is abundantly simple. We would have a board of examiners, independent of all Colleges and Corporations, specially appointed by the Secretary of State for the Home Department, for the purpose of testing the competency of candidates for the license to practise medicine, and to pass this board, to obtain the government license, should be imperative upon all who aspired to the responsible position of practitioner of medicine.

There is in fact but one medical profession, though it be split into several arbitrary subdivisions: the physician, surgeon, and accoucheur, all study the same structure, the same functions in their healthy and disordered states; and they strive, by the same means, to acquire familiarity with the agencies that influence the body in health and disease. The department which each man chooses

in after life is the result of predilection, very frequently of accident, or of circumstance. Let him be left free to select this, and to join a Royal College of Physicians, or a Royal College of Surgeons, or a Royal College of Apothecaries, as he lists, afterwards. Let him go for honours to an University, and acquire a title if he pleases—Government would interfere with nothing of all this. It would only say, as guardians of the public health: "We require every person who proposes to practise medicine in *any* of its departments to have gone through the course of study prescribed by our official Board of Examination, our Council of Health and Education. With existing universities, colleges, and corporations, we do not interfere; our Board or Council prescribes no rules or terms to them; they have full liberty to exact as much more or as much less than our Council or Board require as they please."

We do not think it necessary to enter upon the details of this plan. We would only say this much: that the Board should be tripartite or tri-une—one section being set apart for each division of the kingdom, and holding its sessions at regular and fixed periods—once a quarter, or once a month, in London, Dublin, and Edinburgh.

The Colleges of Physicians, Surgeons, and General Practitioners (should they become incorporated) would then be mere private associations, which government licentiates would join or not as they saw fit; but being associated with which should give no public claim to consideration.

THE PRIME OBSTACLE TO THE SUPPRESSION OF QUACKERY.

WHEN a provincial paper comes into our hands now, we always instinctively turn,—of course, after having read the account of proceedings at the medical meeting which it contains,—to the advertising columns, for the catalogue of quack medicines and quack publications. The following is from a single

number of a liberal newspaper—we dare not add its name, lest the editor should be down upon us for dishonesty, and a dozen other of the deadly sins, as has happened before; but we may say that, save so much space as is occupied by one of Captain J. Rhodes Pidding's medium advertisements of the "Genuine Howqua's Mixture," Sir James's *friends* occupy three columns of the newspaper. The list is the following:—Blackburn's Currant Cough Elixir; Holloway's Ointment and Pills; Wray's Family Medicines, viz., Aromatic Spice Plasters for the Chest, Cough Pills, Essence of Jamaica Ginger, justly celebrated Balsamic Pills, Alterative Tonic Powders and Pills, and Specific Mixture; Ford's Pectoral Balsam of Horehound; Dixon's Specific or Anti-Rheumatic Compound; A New and Practical Work on Premature Decay, enclosed with Dr. Jacques' Eradicative Botanical Pills; Dr. Jacques' Cordial Balsam of Circassia; The 21st Thousand: "Manhood," &c.; Parr's Life Pills; Mr. Thomas's Succedaneum; The 9th Edition: "Manly Vigour," &c.; The 13th Edition: "The Silent Friend;" the Cordial Balm of Syriacum, and Perry's Purifying Specific Pills. We miss Snooks and Cockle, and several other familiar friends, in the above list; but it is long enough notwithstanding their absence.

MOVEMENT IN THE PROFESSION.

THE only meeting of which we have notice—we by no means say that it is the only meeting that has taken place since our last—was held at Sunderland on the 11th inst., Dr. Brown in the chair. The resolutions were of the usual character,—satisfaction with the introduction of a bill into parliament for the regulation of the medical profession; approval of the institution of a Council of Health, but not with its constitution unmixed with general practitioners, &c.; regret at the removal of all restraint from unqualified practice; the necessity of making the projected registration imperative, and the following novelty, as we rather think it, but obvious consequence of what has recently transpired in the metropolis:—"That this meeting views with great satisfaction the plan suggested of incorporating the general practitioners into a college by royal

charter, whereby their interests would be protected, and the representation in the Council of Health and Medical Education, so much desired, might be accomplished." Upon which

"Mr. Mordey rose, and at some length argued that as there were already so many charters, an additional one for the general practitioner would be of no use at all. He thought that in the course of a few short years there would only be two classes of the medical profession—physicians and surgeons; and they ought to bring it to that as soon as possible." We say amen to Mr. Mordey's, in our opinion, very sensible remark. This is what has happened in other countries; wherefore should it not speedily be brought to pass in England?

LONDON MEDICAL DIRECTORY.

We have had information given to us that this projected publication is in the hands of respectable medical men, and that there is nothing quackish or improper in the idea. We have even had a specimen page submitted for our inspection, and not only can find no fault with the execution, but feel disposed to view the thing as likely to be useful. All notorious quacks, all who have fallen away from their high destinies as medical men, though ten times members of the Royal College of Surgeons, should of course be excluded from a list of the profession.

THE GENERAL PRACTITIONERS.

[We have the following from an esteemed friend and occasional contributor. It ought probably to have gone into small type; but our friend having taken the editorial tone, and our printer having set it up large, we give it place next ourself, as containing the views of an influential section of the medical profession."—ED. GAZ.]

LITTLE doubt appears to be now entertained by many influential members of the profession, that the General Practitioners will obtain the object they have set their hearts upon—namely, a charter of incorporation, and a distinct college of their own. The numerical strength and professional importance of the subdivision of the profession to which they belong would of themselves entitle any opinions expressed collectively by this body to great weight and

consideration, even if the cause they advocated had less of truth and justice in it than it really possesses; but when, in addition, we take into account the right-mindedness and business-like notions that characterise all their proceedings, and regard the sound judgment and cogent arguments with which they advocate their cause—and that, too, on public apart from professional considerations—we must in candour acknowledge that we now see no better method of rescuing the profession from its dilemma than by freely conceding to the general practitioners the charter and college they demand.

The chief difficulty in reconciling ourselves to the subdivision of the medical profession into *three* classes of practitioners arose from an anxious desire to retain connected with one or other of our existing Colleges the most numerous and extensively employed of either section, and from a great fear that the majority of the profession would still be degraded by the badge of trade in continuing their connection with the Society of Apothecaries, of the impropriety of which association, our views and opinions have been frequently expressed. But the intelligent general practitioners of the metropolis, as well as generally throughout the country, repudiate such an alliance, and have boldly led the van, themselves taking the initiative: yet, with generous and grateful recollection of their foster-mother—their *pia* mater of the Hall—they invite her to unite with them, dutifully promising to provide her in her extremity with a resting-place and a home. We therefore hope, in sober earnestness, that the general practitioners may succeed in their present endeavours, and that through their means the practice of medicine in this country may be readjusted, by the constitution of a distinct and independent college for each of the three subdivisions into which the requirements of society have arranged the medical profession. We at the same time fervently repeat our former aspirations that there be but one profession, though consisting of *three* instead of *two* classes of practitioners; the new College of General Practitioners being constituted as independent of the existing Colleges as they are of each other.

This plan unquestionably presents the fewest difficulties, for were the

Fellowship of the College of Surgeons thrown open to all its existing Members, that College never could become the head of the body of general practitioners, having no authority to confer a diploma to practise medicine; a privilege which they could never hope to obtain under existing circumstances; and a forced and unwilling connection with the College of Physicians would be equally disadvantageous to both parties.

It is quite clear, indeed, especially as far as the community is concerned, that the general practitioner must be left to his own guidance and direction. Doubtless he will educate himself to as high a standard as the requirements of this great community demand; and if he is contented with the rank and reputation which a diploma from his own college would confer on him, surely the other colleges have nothing to say in the matter.

And now comes the question of pecuniary arrangement—the *main question* after all. But here, too, we think we perceive a method by which all difficulties may be solved, if the arrangements to be made are only entered upon in a kind and liberal spirit: and what a blessing would be conferred upon the community, could these arrangements be undertaken with the anxious desire to reconcile existing differences, and once more reunite our noble profession into a firm, cordial, and zealous body of scientific benefactors to the human race!

We propose, then, *first*, that a sum, to be named hereafter, be appropriated out of the fees paid upon the registration of all legally recognized medical practitioners (such fee and registration to be compulsory, and paid annually), to be paid over to the Royal College of Surgeons, as the guardians and keepers of the Hunterian Museum and Library, and which should henceforth, and in consideration of such annual grant, be open alike to all the members of the medical profession. A registration fee, a portion of which should be appropriated for such a purpose, and as an equitable compensation to the College of Surgeons for parting with its share in the examination fees of the general practitioner, would be a tax that the profession would cheerfully and willingly incur to secure in its integrity that noble collection; the remaining portion of the fees paid on

registration being employed in any way that would conduce to the protection of the community and the security of the individual. Pecuniary matters being, therefore, the difficulty, and the chief difficulty, in any new arrangement of the Licensing Boards of the future members of the profession, we now earnestly and seriously ask the leading members of the great subdivisions of the profession, if private conference and fair arbitration would not be far more likely to lead to an equitable solution of the dilemma, than any public demonstration, however ably or temperately conducted.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Tuesday, December 10th, 1844,

MR. STANLEY, President, in the Chair.

Observations on Cleft Palate, and on Staphylopharynx. By WM. FERGUSSON, Esq., Professor of Surgery in King's College, London.

THE author commences his paper by making some general remarks on the operation for cleft palate, performed in this country and abroad. He then proceeds to give a detailed account of a dissection which he had the opportunity of making of the muscles which operate upon the soft palate, in an individual who had both the velum, and a portion of the hard palate, cleft. This description is followed by an examination of the opinions of different eminent physiologists concerning the motions of the velum palati, and its arches, during the acts of deglutition; and by the author stating his own views as to the actions of the various muscles when the palate is cleft. This part of the subject he further illustrates by describing four different states in which the flaps on each side may be seen upon looking into the mouth of a person who has split palates, and irritating them in different ways. By pursuing this course of anatomical and physiological inquiry, he arrives at the following conclusions: 1. That the flaps are slightly drawn upwards, and to the sides, when the levator palati contracts. 2. That when the levator palati, and palato-pharyngeus, act strongly and together, the flaps are so forcibly drawn from the mesial gap, that they can scarcely be distinguished from the sides of the pharynx. 3. That the flaps are forced together, and the edges come into contact, when the superior constrictor muscle contracts during the act of deglutition. 4. That the circumflexus palati possesses but a feeble power over the flaps. Lastly, the fibres of the palato glossus were very im-

perfectly developed in the specimen in his possession. The chief object of his paper is to communicate a novel plan of operating in staphyloraphy, founded on the above investigations, and which he has put in practice, with most satisfactory results, in two cases, during the last twelve months. The principle of his new proposal is to divide those muscles of the palate which have the effect of drawing the flaps from each other, and widening the gap between them when they contract; so that the stretched velum may be in a state of repose, and the pared edges may not be pulled asunder by any convulsive action of the parts, during the process of union. In other words, he advises, as an important accessory to the operation of staphyloraphy, the division of the levator palati and palato-pharyngeus muscles, and, if requisite, the palato-glossus. In bringing forward this plan, he reviews the different modes of operating which have been produced by numerous distinguished surgeons who have written on the subject: and he concludes by entering into several minute details regarding the steps in his own operation, and by describing the particular forms of instruments which he had found best adapted for his proceedings.

The preparation of cleft palate, a dissection of the parts in the usual condition of the throat, a variety of diagrams, instruments, &c., were on the table, to illustrate the views of the author.

The President inquired if any member present had dissected a cleft palate, and directed attention to the dissection of Mr. Fergusson.

Mr. Caesar Hawkins inquired the ages of the patients operated on, and whether the hard palate, as well as the soft, were involved in the deformity.

Mr. Fergusson replied, that in his operations he had been guided by a rule generally followed in these cases by surgeons; he had not operated until the patients were of an adult age. In both cases, little of the hard palate was involved in the fissure. Such a condition, he thought, made little difference regarding the proposed operation, for, as he had pointed out, the motor power influenced only the soft tissues; should Warren's operation be resorted to, it was quite clear that the tissues dissected from the bones would be subjected to no motory influence. He pointed to some casts before the Society, which exhibited the fissure in the bony palate, and remarked, that an observation of these would shew that when the soft tissues were dissected, and brought downwards, they would easily meet in the mesial line.

The President pointed out the chief features and novelties in Mr. Fergusson's paper, as consisting in the explanation given of the mode in which persons with fissured

palate were able to swallow food without its passing into the nostrils, and the division of the motor muscles of the palate. Did the silence of the members on the subject indicate that they were unprepared to discuss such novelties?

Sir G. Lefevre was sorry that so important a paper appeared to excite so little discussion. He inquired of the author the length of time that elapsed before the fissure was quite closed, and how far the operation had influenced speech?

Mr. Fergusson had referred to the two cases in his paper rather with the view of producing living evidence respecting his operation, than for the purpose of entering into a minute history of the cases. He would, however, briefly describe these cases to the Society. One of the patients was a youth, about seventeen years of age, who had a congenital defect of the palate. He was anxious to make his way in the world, and was desirous, as he had interest, to go into the army, but his deformity rendered his success almost hopeless. When he (Mr. F.) first saw the case, the gap was so extensive, that he was not sanguine as to the success of an operation in producing union, or improving the voice, for experience had convinced him that the latter was scarcely to be more than hoped for. The patient, however, was willing to abide the result of any operative procedure, and the operation described in the paper had accordingly been performed. A part of the gap had opened again, but a second operation was some months afterwards performed, and the success had been complete. The tones, and mode of articulation, appeared at first to be somewhat improved, but soon returned to their former imperfection, and so remained until he placed himself under a teacher of elocution, which he did eight months after the operation. Under the tuition of Mr. Hunt, in a very brief period, the improvement had been truly astonishing, and he (Mr. F.) had no doubt would eventually be such as would enable him to enter the army. The second case was that of a young lady, the same age as the former patient, and who seldom or never attempted to speak in company, so conscious was she of the miserable defect under which she laboured. She cheerfully assented to the operation, which in her case had been successful. There still, however, remained, in this case, a slight aperture anteriorly; this, however, would doubtless soon be closed. Surgeons acquainted with these operations knew well that they occasionally required repetition, and that apertures would sometimes remain for a considerable period afterwards, until closed by the use of the cautery, or of caustic. It might be said that this patient required to be taught to speak, and this, he

thought, she would soon do, if placed under a good teacher of elocution. He had, when Muller and Warren were in this country, inquired of these distinguished surgeons their experience respecting the influence of the operation for cleft palate on the voice, and both these gentlemen replied that they had reason in some cases to be disappointed. A few days after the operation would determine its success, for if, after the stitches were removed at the expiration of six to ten days, the parts kept together, a perfect cure was pretty certain. He referred to a case lately related to him by Sir B. Brodie, in which, after the operation, no improvement in articulation took place until the patient had taken lessons in elocution. He afterwards spoke tolerably well, and obtained a commission in the army.

Dr. Gregory inquired if any mechanical apparatus had been resorted to before the operation in the cases just related; if so, what was its effect? and what was the experience of the author of the paper respecting mechanical contrivances in cleft palate generally?

Mr. Partridge inquired if there were any difficulty in elevating the soft palate, or in deglutition, after the operation?

Mr. Fergusson replied that in the cases he had just related, no kind of apparatus had been used before the operation. He had no experience on this point; Mr. Partridge's question involved a controversial point, for the most eminent physiologists differed with respect to the action and condition of the soft velum during the act of deglutition. He, himself, considered that there was little motion in it during that act. In a patient whom he had the longest opportunity of observing, the motions were much the same as in the natural palate. He could observe the action of the levator palati as readily as in the well-formed structure. He had no doubt that the levator palati had formed new adhesions to the velum. It was worth noticing, that in the early attempt at deglutition succeeding the operation, the morsel was slipped back in the most gentle manner, which was attributable to the tender state of the parts, and the cautions of the surgeon; in addition to these the soft palate was at first so hardened and thickened, that it was used with difficulty, but in a short time it assumed a more natural condition, and the patient could then both swallow and speak with great facility.

Mr. Shaw observed that the author had laid little stress on the action of the circumflexus or tensor palati, in his paper; this might be supposed by some to be a weak point, as the action of this muscle might tend to the separation of the sides of the wound. Much reflection on this subject, however, had led him to attach little impor-

tance to the effects of this muscle on the soft palate.

Mr. Fergusson had mentioned in his paper his opinion that the levator palati exerted but small influence over the moveable parts. He had, at one time, held a contrary opinion, but observation had convinced him the influence of this muscle would be unlikely to interfere with the success of an operation. He was convinced on this point, by the shape, development, and course of the muscle. He referred, in confirmation of this opinion, to a dissection of the muscle in the natural state. The name tensor, implied a power which the muscle did not really possess; the motion was scarcely to be discovered.

Mr. Partridge remarked that the tensor palati was very small in the preparation which had been exhibited.

Mr. Fergusson was of a different opinion, for he thought the muscle larger than usual, and that its action was more apparent in the cleft than in the natural palate.

The next meeting of the Society will be held on Tuesday, the 14th of January, 1845.

PHYSICAL SOCIETY OF GUY'S HOSPITAL.

J. S. STREETER, Esq., in the Chair.

Dec. 14th, 1844.

MR. ILIFF, of Newington Butts, read a paper, in which he brought before the notice of the Society the consideration of those membranous-like formations which are not unfrequently passed by patients mingled with their alvine evacuations. He regarded the mucous membrane of any part of the intestinal canal from the duodenum to the sigmoid flexure of the colon, as capable of originating them when exposed to adequate causes of irritation. Their exact nature he would not take upon himself to decide, but purposely left that part of his subject for elucidation in the discussion which he hoped to elicit. This peculiar disease of the intestine according to his observations occurred most frequently in women, had always been preceded by dyspeptic symptoms, often of long continuance, and was best combated by undeviating attention to diet, soothing measures, light tonics and slight astringents, as Liq. Potassæ and Balsam Copaiba, and the careful employment of only the mildest aperients. He read the particulars of eight or nine cases which had come under his care, all of which, save one, the subject of malignant disease of the os uteri, and another which had passed from his care, had regained and preserved a tolerably good state of health. The paper and cases were illustrated by numerous preparations and drawings. In the course of his observations, Mr. Iliff

alluded to the cases of analogous formations by the bronchial membrane, one read by himself in 1822 (*Med. Rep.* Vol. 18), those read by Mr. North, before the Royal College of Physicians, and recorded in the *LONDON MEDICAL GAZETTE* in 1838, and those by Dr. Reid in the last volume of the *Med. Chir. Trans.*—to the special papers on their formation by the mucous membrane of the duodenum by Dr. Powell in 1818 (*Trans. of the College of Physicians*, Vol. vi.) and by Dr. Todd of Brighton, under the name of Follicular Duodenal Dyspepsia (*Cyclopedia of Practical Medicine*), and particularly to a case that fell under the observation of Dr. Mann Burrows, in 1814 (*Med. Rep.* Vol. 1), at whose request Dr. A. Thomson instituted a chemical examination of the substance passed, and found it “consisted chiefly of animal mucus, combined with a small portion of albumen and gelatin.”

He concluded by drawing attention to a similar case just published by Dr. Arthur Farre, in the *Trans. of the Microscopical Society*, who from the examination he has instituted, believes the formation is one of a confervoid type—an oscillatoria in fact—the result of sporules swallowed by the patient in her ordinary drink. An opinion at which Mr. Iliff expressed his surprise, and could not adopt, unless confirmed by further microscopical examinations, and also by chemical inquiry. Drawings of a conferva, and of the supposed species of oscillatoria, were also exhibited, but the specimen which had been lent by Mr. Sowerby for the occasion, could not then be examined, for the key of the hospital microscope was not forthcoming.

A discussion ensued, in which Drs. Brereton, Edmund, Birkett, Oldham, Munk and Chevers, and Messrs. Greenwood, Blenkarne, Lloyd, and Birket, took part. The essential dependence of these membranous formations on precedent irritation or inflammation—the degree of the latter, and its acute or chronic character—the modification of these membraniform products by respective peculiarities in the minute anatomy of the respiratory or intestinal membrane from which they derive their origin—and the probability of their being the result of two different morbid conditions of the mucous membrane; the one, irritation, producing a mere thickened epithelial coat of the tube, as in the so-called cases of bronchial polypus, while the other was a real acute inflammation attended with effusion of fibrine, as in croup, formed the most interesting topics of debate. Mr. Blenkarne related a case where a cast of the meatus auditorius externus had been thrown off. Dr. Oldham particularly contended for the two-fold morbid origin of pseudo membranes, by an especial reference to observations on membranous

menstruation. He had lately had the opportunity of microscopically examining this morbid structure in the uterus of a woman who died during the catamenial period, and had found it to be of epithelial formation. The hour allotted for discussion having elapsed, the cordial thanks of the Society were voted to Mr. Iliff, and the President announced that the next meeting would take place on Saturday, the 4th of January, but did not name the subject for discussion.

DR. GUY'S REPLY TO MR. TAYLOR.

WE last week stated that we had closed this unpleasant subject. Dr. Guy considers that he has not been fairly treated, and requests us, in justice to him, to insert a letter in reply to Mr. Taylor, with additional remarks upon the notice of his book contained in the number of last week. We are willing to oblige Dr. Guy in his request, and have inserted his communications.

To the Editor of the Medical Gazette.

SIR,

MR. TAYLOR'S letter of last week puts an end to all controversy between my reviewer and myself, and renders the publication of the last letter which I had the honour of addressing to you unnecessary.

Mr. Taylor fairly takes upon himself, though in a very modified and subdued form, the unmeasured invective of the review, which I never regarded in any other light than as the exaggerated and distorted representation of Mr. Taylor's sentiments. His charge against me is to the effect, that the “*Manual of Medical Jurisprudence*” has been much more frequently used by me, without reference or acknowledgment, than is either proper or becoming in one writer following another so closely on the same subject;” and in the last paragraph of the letter the charge is limited to the statement that my “*Chemical Toxicology*” is substantially abridged from that lately published in the ‘*Manual*,’ with occasional interpolations from Christison and Beck.” This, then, seems to be the extent to which Mr. Taylor seems ready to support the allegations of the review.

I must first express my surprise that Mr. Taylor, who, I presume, has not made this charge without reading my book with some attention, should designate my constant and full references to Christison's work as “occasional interpolations.” Why, my quotations from Christison are three times as numerous, and ten times as important, as those from the *Manual*. I not only constantly refer to him for cases, but for more complete and detailed information on all the

more important points of toxicology. Beek is quoted only once. This extraordinary misrepresentation of Mr. Taylor's must convince any impartial man that he writes under the influence of some feeling very unfavourable to accuracy. He is evidently labouring under some strange mistake, or he is the dupe of a "foregone conclusion."

Now, as to the remainder of the charge. My "chemical toxicology," it appears, is an abridgment of Mr. Taylor's. I presume that this phrase is synonymous with the more common expression "tests for poisons." If so, I have merely to remind Mr. Taylor that for some few years past I have been in the habit of exhibiting to my class the tests for poisons, of explaining the necessary precautions, and of pointing out the fallacies which attach to them. With all my proneness to plagiarism, therefore, my knowledge of the subject prevented me from gratifying my favourite propensity to any great extent. If Mr. Taylor had made some important chemical discoveries, or suggested a score or two of new tests, I should of course have appropriated them without a moment's hesitation; but as I found only two unimportant suggestions, I made an open display of my honesty, and quoted them in due form. To keep up appearances, I put one of them to the test of experiment, and was somewhat surprised to find that it did not answer. I was not aware, till I read Mr. Taylor's letter, that the accident of priority of publication conferred the right of appropriating the common and familiar facts of chemistry. I had innocently regarded them as public property, and am not even now quite convinced of the contrary. If Mr. Taylor should succeed in establishing this monopoly, and I in reforming my bad habits, matters will be greatly simplified. One comprehensive reference will suffice.

In truth, Mr. Taylor's Manual was a great embarrassment to me. I knew that if I did not refer to it, I might, by some untoward coincidence, strengthen the premeditated charge of plagiarism. For instance, had I cited the familiar case in which the question of the influence of habit in lessening the effect of opium was raised in a Court of Law, I should have added force to the felicitous parallel of my reviewer. If, on the contrary, I had made no reference to the Manual, or if I had followed Mr. Taylor's own example, and, instead of saying Mr. Taylor gives this case, or thinks this or that, I had said such and such a case had been recorded, or such an opinion had been entertained, I should have been accused of passing over in silence the name of a contemporary. I could only avoid the appearance of copying Mr. Taylor's arrangement, by departing as widely as possible from Dr. Christison, whom I had adopted as my model. I must have put the vegetable poisons before the

mineral, or zinc before arsenic, or I must have mixed all the poisons together, or invented some unsound arrangement of my own. Again, in treating the individual subjects, I must have departed from the plan of the first two parts, and of my lectures, and have blended tests, symptoms, post-mortem appearances, smallest fatal dose, average duration, and treatment, in undistinguishable confusion. By these means, and by these alone, could I have escaped the charge of plagiarism. The alternative was a confused contrast to the first two parts of my book, or the lash of the reviewer, and the accusation of Mr. Taylor. It required some courage to prefer the last, but I embraced it without hesitation. By means of a new arrangement of the tests for poisons, the invention of a new form of chemical table, sundry extensive analyses of cases of poisoning, a novel suggestion here and there, and an occasional experiment, I contrived to give an air of originality to the "Principles," to which, in my partiality for my own production, I attach some slight importance.

One word about the letter to the *Lancet*. For reasons which will be easily understood, I did not state all the circumstances which led to that communication. I now supply the deficiency. A mutual friend of Mr. Taylor and myself, whose name it is unnecessary to mix up in this controversy, wrote to me to state that Mr. Taylor had pointed out to him several passages in my second part which had been taken with little or no alteration from the first volume of the "Elements of Medical Jurisprudence." I lost no time in explaining the circumstance both to the friend in question, and to Mr. Taylor, and I have the best reason to believe that my explanation was satisfactory to both gentlemen. After this communication with the party most interested, I thought to hear no more of my unintentional appropriations, but finding that the subject was talked about, I wrote the letter alluded to. It is necessary to state that my friend assured me that he had not opened his lips on the subject.

The letter which I addressed to you the week before last, renders a longer reply to Mr. Taylor's charge unnecessary. I have only to add, that I justify the use I have made of his "Manual," and am willing to abide by the sentence which the profession may pass upon me. What I have done, I have done deliberately, and with a full conviction that, do what I might, I could only escape censure by consenting to abandon the order and arrangement of which experience had taught me the value.

I have the honour to be, sir,

Your obedient servant,

WILLIAM A. GUY.

15, Bloomsbury Square,
December 9th, 1844.

The following is Dr. Guy's second letter in reference to the criticism contained in our last number.

DR. GUY'S REPLY TO THE "REMARKS."

To the Editor of the Medical Gazette.

SIR,

THE "Remarks on Dr. Guy and his Reviewer," in the last number of your journal, took the place which I thought I had secured in your pages by the early transmission of my reply to Mr. Taylor's letter. I trust that that reply will appear in your number of next week, and I take the liberty of requesting the insertion of the following additional observations on the "Remarks." I am placed in a very embarrassing position between mirth and anger. I do not know whether to be amused by the ridiculous claims to originality set up on behalf of Mr. Taylor, or angry at the disingenuous way in which that claim is supported; and I believe that the profession is in the same predicament. If Mr. Taylor had made as many discoveries as Sir Humphry Davy, as many inventions as Wollaston, and proposed as many new tests as Orfila and Christison combined, he could not be a greater man than his critics and commentators would make him out to be. If I had stolen from him as many discoveries as all these great men together have made, he could not be more aggrieved than he represents himself to be, by my alleged appropriation of chemical equivalents, simple rules of proportion, familiar tests, and distinct headings. This it is that moves my mirth. My indignation is roused by the intentional misrepresentations of the author of the "Remarks." I may add that he must be a very unsuspicious person who does not imagine that he sees in these "Remarks" the handiwork of Mr. Taylor himself. The writer, whoever he may be, has Mr. Taylor's authority for one, at least, of his statements, and he knows too much of Mr. Taylor's history, and of

Taylor, p. 147.

Objections. Corrosive sublimate is volatile like white arsenic, but it differs from it in all its other properties. It is very soluble in water, insoluble in potash, which turns it of a yellow colour, while hydrosulphuret of ammonia turns it black. Indeed, it may be said that there is no substance but arsenic, which possesses the three first characters mentioned; they should, however, be taken together.

The fraud which has been committed is obvious at a glance. The passage from the "Principles" is part of a process of elimination; that from the "Manual" is the commencement of a series of objections. The very order of the tests is a deception.

mine, not to be readily identified. Be the author, however, who he may, I accuse him of a series of deliberate misrepresentations, of intentional suppressions of the truth, and of equally intentional suggestions of what he knows to be false.

I make this statement deliberately, and prove it by referring to the parallel which he has drawn up with so much apparent care, but which, in the narrow limits of a page and a half, furnishes a complete compendium of every vice, except that of plagiarism, which can be practised with the pen.

The second edition of Christison, like the first and third, contains these words:—"The solution of the oxide of arsenic in boiling water yields minute crystals on cooling, which, when their form is defined, are octahedres." (p. 229.) These words begin a paragraph, and that paragraph follows the one which treats of the solubility of the poison in water. Does the author of the "Remarks" still assert that this property of arsenious acid is not to be found in Orfila or Christison, but only in the Manual? Does he also persist in claiming as Mr. Taylor's property the fact, that arsenious acid combines with alkalis, forming soluble arsenites? He may as well lay claim to the A B C. It is very unkind of the author of the "Remarks" thus to turn Mr. Taylor into ridicule.

So much for the first misrepresentation. The next is an improvement upon it. Under the head "Powder," there is marked in italics, as being taken from the Manual, the following sentence. "Add liquor potassæ, no change. Corr. sub. turned yellow;" and on the opposite side, "Corrosive sublimate, volatile like arsenic, but turned yellow by potash." Now, an unsuspicious reader would not hesitate a moment to accept both these passages as true and ungarbled abstracts. No such thing. They are two admirable examples of the *suppressio veri*. The passages from which they are taken ought to be placed side by side.

Guy, p. 453.

The effect of heat does not prove the powder in question to be arsenious acid, for bichloride of mercury, and calomel, also sublime unchanged. To another portion of the powder add liquor potassæ. If the powder be arsenious acid, no change takes place. Corrosive sublimate is changed to a yellow, and calomel to a black colour.

They do not stand in my work as 1, 2, 3, 4, 5, but heat and caustic potash are used as preliminary tests, on the supposition that the nature of a white powder is unknown; and tests 3, 4, and 5, are used to confirm the indications afforded by the first two tests.

After these illustrations of the scrupulous care and regard to truth of the author of the "Remarks," your readers will not be unprepared for the assertion, nor much surprised at the plain language in which it is couched, that the statement that the properties of the oxide of cadmium are "copied from the Manual *ipsissimis verbis*," is a deliberate falsehood, admitting neither of palliation nor excuse. See "Principles" p. 454, and "Manual," p. 147.

Having now shewn the dishonesty of my anonymous accuser, I should treat the rest of his production with the contempt it deserves, but that the "authority" with which he uses Mr. Taylor's name, and his unusual familiarity with the relation in which I have stood towards that gentleman, gives it all the importance of a manifesto from Cambridge Place.

It appears that there are stronger instances of plagiarism than the passage on habit which recoiled so pleasantly on Mr. Taylor. Why, then, did the reviewer make so unlucky a selection? Why does not the author of the "Remarks" favour us with some of those stronger instances? The *ipsissima verba* must be easy enough to find. Why not have quoted them? Simply because assertion is much easier and more convenient than proof.

I pass over the alleged "misapprehensions" and "mystifications" about arsenite of copper and sulphuret of lead, the very original formula which the writer of the "Remarks" has Mr. Taylor's authority for asserting to have been used by him in his lectures at Guy's Hospital since 1831, and which it appears that I have taken from him without acknowledgment, and the asserted appropriation of chemical equivalents, as trifles which he may amuse himself with as long as he pleases. If he will persist in claiming these familiar facts and every-day calculations, he will have enough to do to defend his monopoly, and must forthwith make up his mind to the trouble and expense of a *scire facias*. I, for my part, am very angry with the chemists of the last century for the unwarrantable use they have made of the Manual, and I fear that their bad example will be followed till the end of time. I begin, indeed, to have some misgivings as to the honesty of our arithmeticians. The rule of three is evidently in danger of being made into a monopoly. Once more, I would remind the author of the "Remarks" that whatever authority he may have received as to the chemical application of the rule of three, he must have greatly exceeded his powers in thus turning Mr. Taylor into ridicule.

The author of the "Remarks" will doubtless be greatly surprised to hear that I do not acknowledge my obligations to Mr.

Taylor in the matter of the "distinct chapters, sections, or paragraphs." He may rest assured that if I had preceded him as a writer on toxicology, and had never even seen or heard of him, I should have forestalled him. No one who has read the first two parts of my work can doubt the truth of this assertion, and the very turn of my mind, and my mode of collecting and arranging information, render the adoption of minute subdivisions and distinct headings inevitable. I have myself some intention, by way of amusement, of claiming the adoption of such distinct headings, in treating the subject of infanticide.

The writer of the "Remarks" hardly knows how to receive my assertion "that the order in which the several tests are placed is one peculiar to myself, and which I have always followed in my lectures." It is passing strange that the acuteness which discovered *ipsissima verba* in the description of the crusts of cadmium, and the industry which brought together the *disjecta membra* of the parallels, could find no illustration of the truth of this statement. It was not necessary that he should con my book "paragraph by paragraph, page by page," in order to find some clue to my meaning. He missed it for the same reason that he passed over the test in the second edition of Christison. It looked him in the face as he was garbling the tests for arsenious acid. Let him turn to page 413 of the "Principles," and he will be enlightened as to my meaning, and will understand the "occasional transposition of an experiment in the series," and the reason for it.

The last paragraph but one of the "Remarks" places Mr. Taylor in a dilemma from which, I fear, he will find some difficulty in extricating himself. Either he himself, or some one entirely in his confidence, and writing under his authority, is the author of the "Remarks." On the first supposition I have accused him of deliberate misrepresentation; on the last, he has been very unfortunate in the choice of a confidant. In any case, I greatly prefer my position to his, and have reason to congratulate myself that one at least of my accusers stands convicted of a worse crime than that of plagiarism.

I have the honour to be, sir,

Your obedient servant,

WILLIAM A. GUY.

15, Bloomsbury Square,
Dec. 14, 1844.

REMARKS.—We will give Dr. Guy the benefit of his statement, that Dr. Christison, and probably other chemical writers before him, were aware that arsenious acid was deposited in octohedral crystals from its solution. We merely invited our readers to

contrast generally the analytical processes pursued by the four different authors. And we repeat, that differences will be found to exist among them, as much with respect to new applications of well known chemical facts, as with the invention of entirely new processes. This answer applies also to his remarks on the arsenite of potash. It has been long known that arsenious acid is soluble in caustic potash. Mr. Taylor, and Dr. Guy give it as a test for powdered arsenic. Orfila and Dr. Christison do not.

The passages quoted by Dr. Guy relative to corrosive sublimate will at once show how he has treated the Manual. He omits to state that no such passages occur in Christison, Orfila, or any other work, treating of the tests for arsenic,—the great object of our quotation. He states, that his paragraph is “part of a process of elimination,” and that “the very order of the tests is a deception.” We admit, but not in the sense he intends, both of these positions; but this is no answer to the charge, that he

Taylor, p. 147.

The oxide of cadmium may be reduced by a similar process, but the metallic sublimate is wholly different from that of arsenic: it has a tin-like lustre, and has a brown margin of reproduced oxide. There is no odour of garlick during the reduction of oxide of cadmium, and on heating the metallic ring it is not wholly volatilized like arsenic, but converted to a ring of brown oxide. Oxide of cadmium is of a brown colour; it cannot be volatilized on platina by the heat of a spirit lamp; it is quite insoluble in potash, but easily dissolved by nitric acid. * * Oxide of cadmium is, moreover, a very rare substance—it is difficult to meet with it.

We simply ask our readers to compare these two passages, and bearing in mind that we have all along alleged that Dr. Guy has abridged the descriptions of facts contained in the Manual, we further ask them to say, whether our reviewer was far wrong in stating that Dr. Guy had copied this paragraph from the Manual “*ALMOST ipsissimus verbis!*” And yet Dr. Guy has the courage to assert, that the allegation is a “deliberate falsehood, admitting neither of palliation nor excuse.” We cannot fill our pages by making further quotations; but if our readers will take the trouble to refer to the tests for *arsenic acid* they will find that Dr. Guy is equally unfortunate in his reference to this part of our criticism. Let the tests for oxalic acid, and, indeed, of all the poisons contained in the two works, be compared, and with few exceptions they will be found very similar, so similar as to bring home conviction to our minds that our charge of plagiarism was well founded. Whether Dr. Guy uses tests in a different “order,” or employs them as

has substantially taken the facts there stated from the Manual. If Dr. Guy considers that it is a sufficient answer to say, he uses the tests in different order, we cannot agree with him.

We alleged that the objections and answers respecting *oxide of cadmium* were “copied from the manual almost *ipsissimus verbis.*” Dr. Guy omits the word “almost,” and states this to be “*a deliberate falsehood, admitting neither of palliation or excuse.*”

We first distinctly affirm, what Dr. Guy is wholly unable to deny, that these objections and answers occur in no other works on toxicology but his own “Principles,” and Mr. Taylor’s “Manual.” Whatever may be said about octohedral crystals and arsenite of potash, this is a fact which he has not even attempted to controvert. In order to see whether the “deliberate falsehood” lies with our reviewer or his accuser, we here give the quotations, to which we referred in our last number, *verbatim*, and to which Dr. Guy boldly refers our readers.

Guy, p. 454.

The oxide of cadmium may be reduced so as to form a crust. In answer to this objection, it is sufficient to state, that the oxide of cadmium is extremely rare, and of a brown colour—that the crust is bordered by this brown oxide—that it gives out no garlick odour, that it is not readily volatilized like arsenic, and that the ring of metal when heated is converted to the brown oxide instead of being sublimed as a white powder, or a ring of octohedral crystals.

“part of a process of elimination,” we still find, what we originally asserted, that the third part of his book bears a close resemblance to the corresponding part of Mr. Taylor’s volume. So far as we are concerned the matter is here closed: we cannot insert any more communications on this subject. Our pages have been occupied to a somewhat unreasonable extent with the discussion.

PROPOSAL

TO INCORPORATE THE EIGHTEEN THOUSAND LICENTIATES OF THE HALL INTO A ROYAL COLLEGE OF APOTHECARIES.

To the Editor of the Medical Gazette.

SIR,

THE contemplated degradation and ruin of the surgeon-apothecary, by the proposed enactments of Sir James Graham’s bill, is so palpable, and so generally acknowledged, that it appears quite superfluous to attempt

the establishment of a case: whether this impending degradation and ruin be accidental, (which it is barely possible to believe), or intentional, it is of little moment to inquire; *the fact* is all with which at the present juncture we have anything to do, and that does not appear to admit of doubt. I will, however, for satisfaction sake, briefly set down what is contemplated for the surgeon-apothecary by the impending law.

1st. All restriction upon unqualified practitioners is removed.

2nd. He is virtually deprived of the power of educating his own class.

3rd. The law takes from him his present titles, and gives him nothing, or as good as nothing, in exchange.

For he finds himself excluded from the council, excluded from any share in determining the education, or influencing the character of the examination of his own class, without any real participation in the examination itself; and as regards the future licentiate, after his education and examination have been directed by the Colleges of Physicians, the bill secures him *no admission into either of the bodies*.

There is a point in medical practice, alike familiar to all, which occurs when the practitioner has made himself master of the case; and the point is this—what is to be done?

That the case before us admits of an easy and certain remedy I have no doubt. The remedy is *incorporation*. Dr. Webster, Mr. Ryan, and an anonymous writer in the *Lancet*, propose incorporation of the general practitioners into a "Royal College of Medicine and Surgery." With all deference to these respectable individuals, I am decidedly of opinion that *any and every attempt* to establish such a body would *fail; utterly fail*—the attempt was made, vigorously made, more than thirty years ago, and *failed*. The Apothecaries' Act was, indeed, the consequence of that movement, and the only consequence.

The great impediment to the enterprise was the same as exists at the present time, with the exception that it is infinitely more formidable and impregnable; the proposed institution would be a *rival* to the Royal College of Surgeons. Who can for a moment doubt the influence of this body? Who can doubt but that that influence would be vigorously applied? Who, in the present state of our affairs, could doubt but that that influence would be *sufficient to defeat* the utmost exertions of its *enemies to ruin* its establishment.

In my humble opinion *this is not* the remedy, but, with your leave, I will tell you in what the remedy does really consist, against which no such opposition need be apprehended, the sure and certain effect of

which is such as need not to be questioned; which is so reasonable, so just, and so especially suited to the case, that not even the framers of the *bill* (I was about to write the *accursed bill*) shall be found to have courage to refuse, if vigorously sought, and if applied for *without delay*.

The remedy I have to propose is the incorporation of the *eighteen thousand licentiates* of the Hall into a "*Royal College of Apothecaries*," and to change the title of the trading Apothecaries' Company into the "*Worshipful Company of Chemists and Druggists*." By this simple means we obtain what is clearly wanting, a *third estate* in the medical institutions of the country, not the anomalous mongrel kind of thing proposed to be created by the bill in the person of the "licentiate in medicine and surgery, for whose education the provisions of that bill are so *vague and unsatisfactory*, but, a clearly defined, well and thoroughly educated body of medical practitioners, to which the community are accustomed, who, with or without the additional qualification of being a member of the Royal College of Surgeons, shall be in every way *worthy of the respect* of his colleagues, and of *public confidence*. This Royal College of Apothecaries must have identically the same power and control over the education of its class as is enjoyed by the other institutions; they must have a voice in the Council of Health, and in every respect be placed on the same footing as the Royal College of Surgeons. It must have a council and a court of examiners; all present licentiates must be members, and all eligible to be elected to fill the offices of the institution. Candidates having passed their examination to be entitled to membership, and the required "letters testimonial."

This Royal College of Apothecaries being established, the medical institutions of the country would stand thus:—

The Royal College of Physicians.

"	"	Surgeons.
"	"	Apothecaries.
"	"	Chemistry.

The chemists have already obtained a Royal Charter of Incorporation. Would the list be improved by erasing the Apothecaries? What have the Apothecaries done that they should be thus signally victimised? The public cannot do without them, and though the Apothecaries' Act be repealed, Apothecaries will still continue, though a degraded order. Let them be incorporated, as I have suggested, and then the work of legislation becomes comparatively easy; at any rate the *great degradation and impending ruin* with which we are so *fearfully threatened* would be averted, and the condition of our order

greatly improved. Should the licentiates of the Hall, (for it is to them that I more particularly address myself) be of the same opinion, I say let us earnestly co-operate for the attainment of our object. The Institution I propose accomplishes, or may be made to accomplish, every purpose. It makes the profession complete; it supplies all the wants of the public; it makes the apothecary respectable; and gives to the general practitioner a double claim to the confidence of the community. It leaves the province of pure surgery open to those who choose to follow it, and the doctor of medicine altogether unmolested.

It may be urged that I have laid the foundation of a feud with the "*Society of Apothecaries*," in proposing to change the title of their Company; I know not how that may be, for I have had no correspondence with them; but if they are sincere in the last paragraph of their able and lucid explanation of the bill, which has only been in my hands a few days, and which it is the bounden duty of every one of their licentiates to read, and the perusal of which has given rise to this letter, they will not *vexatiously* oppose any plan, affecting themselves in so slight a degree, that it is calculated to promote the *public good*. The Society of Apothecaries rightly considered are only a company of wholesale and retail druggists, and in sober honesty should have no objection to the change proposed; the change is *important*, as thereby the title of Apothecary is made more *respectable*, and the anomaly of a Royal College of Apothecaries, and a trading Apothecaries' Hall, existing simultaneously, could not otherwise be got rid of; the one being, as before stated, a trading company, the other an institution *especially devoted to the promulgation of medical science*. I have studiously confined myself to the general principle; I might otherwise have extended my letter to a length inconvenient to your pages. I am aware that the proposition will come in the shape of a novelty; it is, however, no novelty with me; the idea has prevailed in my mind since the first publication of "the bill."—I am, sir,

Your obedient servant,

JAMES COLE,

Member of the Royal College of Surgeons,
and Licentiate of Apothecaries' Hall.

Bewdley, Worcestershire.

NOTE FROM DR. BRERETON.

To the Editor of the Medical Gazette.

SIR,

MAY I request the earliest insertion of the following correction of an important error, which occurs in your report of the discus-

sion on Aneurism, which took place at the Guy's Physical Society, Nov. 30th.

It is there stated, "A case of thoracic aneurism in St. Bartholomew's Hospital, where Mr. Paget, with the sanction of Dr. Latham, had employed venesection *fifty times*, was related by Dr. Brereton to have proved *completely successful*, as demonstrated when the patient died of concomitant disease of the lung two years after."

What I did say was, "that I had been informed that Mr. Paget, under Dr. Latham's sanction, had, in a case of thoracic aneurism, employed frequent minute bleedings, amounting in all to upwards of *thirty*; that the prominent symptoms of aneurism were allayed; and that, when the patient died some time after of phthisis, it was found that the sac had contracted, and that the aneurism was apparently progressing to a cure."

In justice, however, to Mr. Paget and the medical public, I must now add, that even my corrected statement is not quite satisfactory; for Mr. Paget states, "The man was bled not more than *twenty times* in about six or seven weeks; and the *aneurism was not cured*. Its progress appeared to be arrested, but it existed as an aneurism when the patient died."—I am, sir,

Very obediently yours,

J. CADELL BRERETON,

M.B. Cantab.

Guy's, Dec. 18, 1844.

EVOLUTION AND DELIVERY WITH PRESENTATION OF THE ARM AND SHOULDER.

A HEALTHY woman, who had already had several children without difficulty of any kind, was taken in labour again, and besides the waters, lost a considerable quantity of blood. When seen first, the right upper extremity of the foetus was found projecting from the external parts of the mother: the pains at this time had almost ceased, but on an attempt being made to introduce the hand, and turn, they came on again with such violence that the attendant was on the point of taking away some blood to moderate their force. The mother now said she felt the child advancing, and in fact the right shoulder and collar-bone were forced beyond the vulva: the lower extremities and buttocks were at the same time forced into the hollow of the sacrum, and by and by the right ramus of the lower-jaw came into sight, the shoulders and arm having receded. But little effort was required to disengage the breech, upon which the child was quickly born; but it was dead. The placenta followed, and an hour afterwards the woman felt herself very comfortable."—DR. SUSSEWIND, in *Caspar's Wochenschrift*, No. 23.

COMPARATIVE ANALYSIS
OF
THE FOOD CONSUMED AND THE
EXCREMENTS PASSED BY A
TURTLE DOVE ;

UNDERTAKEN WITH A VIEW TO ASCERTAIN
WHETHER OR NOT THERE IS ANY EXHA-
LATION OF AZOTE DURING RESPIRATION
IN THE GRANIVORA.

By M. BOUSSINGAULT.

AN exhalation of azote is pretty generally acknowledged, at the present time, as a consequence flowing from the experiments of Dulong and Despretz. Some years ago, M. Boussingault was himself led to adopt this inference as correct ; but certain motives

have lately induced him to study the matter anew.

Every precaution was of course taken to secure uniformity of circumstance and condition. The millet seed with which the bird was fed was from one parcel ; it was carefully kept from moisture, none was lost, &c. The excrements fell upon a glass plate at the bottom of the cage ; they were weighed moist, and then dried at a moderate temperature. The temperature of the room in which the dove was kept never exceeded from 10° to 11° C. (50° to 51·8° F.) The experiments were divided into two series ; the first comprising a period of five, the second one of seven days.

The results of the two series of experiment^s are comprised in the following table of—

Food consumed and Excrement passed by a Turtle Dove during five days.—1st Series.

Weight of Millet Seed, presumed absolutely dry.	Principles contained in the Food and Excrement.					Weight of the Dove.	
	Carbon.	Hydrogen.	Oxygen.	Azote.	Salts.		
Grms. 65·91	Grms. 30·37	Grms. 4·15	Grms. 27·52	Grms. 2·17	Grms. 1·70	At first	Grms. 187·90
Dry excrement 15·04	5·96	0·77	5·15	1·39	1·77	At the end	186·27
Principles eliminated in five days	24·41	3·38	22·37	0·78			

Food consumed and Excrement passed by a Turtle Dove during seven days.—2d Series.

	Principles contained in the Food and Excrement.					Weight of the Dove.	
	Carbon.	Hydrogen.	Oxygen.	Azote.	Salts.		
Grms. Dry millet seed 101·15	Grms. 46·60	Grms. 6·36	Grms. 42·24	Grms. 3·34	Grms. 2·61	At first	Grms. 186·70
Dry excrement 24·056	9·77	1·20	8·31	2·20	2·58	At the end	185·47
Principles eliminated in seven days	36·83	5·16	33·93	1·14			
Food consumed in 12 days 167·06	76·97	10·51	69·76	5·51	6·31	Weight of Dove at commencement of whole series. 187·90 grs.	
Principles eliminated in 12 days	61·24	8·54	36·30	1·92			
Principles eliminated in 24 hours	5·10	0·71	4·69	0·16			
Combustion of Carbon per hour	0·212					At end of ditto.	185·47 grs.

Taking the mean of the results, and reducing the French into English weights, it therefore appears that a turtle dove, weighing 2886·9 grains or 6 oz. troy, consumes in the course of respiration, during twenty-four hours, 78·733 grains of carbon ; and emits, in the same space of time, 288·690 grains of carbonic acid, and 1·470 grain of azote ; or, estimating the quantities by volume, 16·616 pints of carbonic acid, and 0·221 of a pint of azote ; whence it results that the azote exhaled by the animal is nearly the 100th of the volume of the carbonic acid produced,—a

conclusion which agrees, in so far as the fact of the exhalation of the azote is concerned, with that obtained by Dulong and Despretz ; but which differs notably in regard to the quantity ; the azote exhaled, when contrasted with the carbonic acid gas, being much smaller in amount than it was found by these inquirers. Small as the quantity of azote is, however, it still constitutes one-third of that which entered into the composition of the food consumed by the turtle dove. In the circumstances in which this bird was placed, the excrements did not

contain more than two-thirds of the azote which preexisted in the millet seed consumed. Thus, independently of the modifications which the food, or rather the blood which proceeds from it, undergoes in the course of the pulmonary combustion, it may be conceived that a part of the azotised principles of the animal organism also undergoes complete combustion, so as to give rise to carbonic acid, to water, and azote; unless, indeed, we suppose that, under certain influences, the azote of the quaternary compounds may be partially eliminated; and give rise, by this elimination, to ternary compounds.

From the table which gives the elements of the two series of experiments, it is seen that the hydrogen and the oxygen eliminated are not in the proportions necessary to constitute water. The oxygen dissipated in a day being 72·404 grains, would require 9·818 grains of hydrogen to turn it into water. The excess of hydrogen, therefore, which, like the carbon, is burned by the concurrence of the oxygen of the air, is 1·080 grains.

In viewing respiration as a kind of combustion, the preceding data would imply that a turtle dove weighing 6·014 ounces troy, breathing freely in an atmosphere of from 46°·4 to 50° F. (8° to 10° C.) in which it burns, in the course of twenty-four hours, 78·733 grains of carbon and 1·080 grain of hydrogen, may disengage enough of heat to maintain its body at a nearly constant temperature of between 105°·8 F. and 107°·6 F. (41° and 42° Cent.), turning the water at the same time into vapour, which is escaping by the pulmonic and cutaneous exhalation; water, the quantity of which, as will immediately be seen, amounts to more than 46·314 grains troy.

In a first experiment, the turtle dove, on its diet of millet seed, drank, in two days, 197·606 grains troy of distilled water.

In another experiment, 196·652 grains in four days; consequently 394·258 grains, or 98·564 grains, per diem.

It is now possible to make an approximation to the quantity of water which the bird lost by cutaneous and pulmonic exhalation:—

In 12 days the turtle dove, with the millet seed which it ate,	Grains.
took in of water	421·457
Of water it drank directly . . .	1181·007
Whole water consumed	1602·464
Water contained in the 100·29 grammes of moist excrement } grammes of moist excrement }	1099·031
Difference, or whole water thrown off by the pulmonic and cutaneous exhalations }	503·433

Per diem	42·045
Water formed in a day by the } 0·07 of hydrogen in excess }	9·725
Whole quantity of water thrown off in 24 hours by transpiration, pulmonic and cutaneous }	51·871
<i>Comptes Rendus, Vol. 19, No. 2.</i>	

MORTALITY OF THE METROPOLIS.

Deaths from all causes registered in the week ending Saturday, Dec. 7.

ALL CAUSES	988
SPECIFIED CAUSES	988
I.—Zymotic (Epidemic, Endemic, and Contagious) Diseases, 191; among which, of—	
Small Pox	31
Measles	39
Scarlatina	44
Whooping Cough	26
Croup	5
Thrush	3
Diarrhoea	4
Dysentery	1
Cholera	0
Influenza	1
Typhus	21
II.—Dropsy, Cancer, and other Diseases of uncertain or variable Seat 85; among which, of—	
Inflammation	0
Dropsy	17
Scrofula	0
Cancer	17
Atrophy	5
Debility	25
Sudden Deaths	11
III.—Diseases of the Brain, Spinal Marrow, Nerves, and Senses, 159; among which, of—	
Hydrocephalus	33
Apoplexy	27
Paralysis	13
Convulsions	62
Insanity	1
Delirium Tremens	3
IV.—Diseases of the Lungs, and of the other Organs of Respiration, 336; among which, of	
Pneumonia	127
Hydrothorax	6
Asthma	31
Phthisis or Consumption	112
Diseases of the Lungs, &c. . . .	23
V.—Diseases of Heart and Blood-vessels 42	
VI.—Diseases of the Stomach, Liver, and other Organs of Digestion, 54; among which, of—	
Teething	10
Gastritis	1
Enteritis	7
Tabs	8
Hernia	3
Disease of Stomach, &c.	8
Disease of Liver, &c.	9
VII.—Diseases of the Kidneys, &c. . . .	16
VIII.—Childbirth, Diseases of the Uterus, &c. 7; among which, of—	
Childbirth	6
Disease of Uterus	1
IX.—Rheumatism, Diseases of the Bones, Joints, &c.	6
X.—Diseases of Skin, Cellular Tissue, &c. 0	
XI.—Old Age	68
XII.—Violence, Privation, Cold, and Intemperance	24

THE
LONDON MEDICAL GAZETTE,

BEING A
WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

FRIDAY, DECEMBER 27, 1844.

CLINICAL LECTURES IN SURGERY.

Delivered at the Middlesex Hospital,

BY MR. ARNOTT.

December 5th, 1844.

THE lecturer began by remarking that as the Council of the College of Surgeons now required of candidates for the Fellowship—and he hoped all those present would wish to become fellows—that they should produce certificates of having attended two courses of clinical lectures in surgery of six months' duration each, it became necessary that these lectures should be commenced forthwith. It was no doubt true, that the most valuable part of clinical instruction was that which was given at the bed-side; but still their meeting in the theatre was useful. Besides observing the daily progress of cases, it enabled him to take a review of some of the cases from their commencement to their termination; it gave him the opportunity of bringing together cases of similar kind which had been at the same time in the house, and of comparing or contrasting them, and of making the pupils acquainted with occurrences which had taken place during their absence, or which they could not have had an opportunity of witnessing. It was not his intention, in these lectures, to read over the daily reports of the cases—these were to be found in the books—but in giving a general account of a case, to dwell especially upon those points in regard to symptoms, course, action of remedies, or appearances observed after death, which seemed most striking, or worthy of being impressed upon their memory. The principal subject of to-day's lecture would be Abscess,—to several examples of which he would now proceed to refer.

Abscess of the Abdomen.

Mary M., æt. 24, married, was admitted 891. 7 XXXV.

Oct. 8th, 1844, with a large abscess on the left side of the abdomen, close to the inner side of the anterior part of the crest of the ilium and the adjoining portion of Poupart's ligament: the integuments over it were red, and examination gave pain; there was no febrile disturbance; looked healthy. Ten days previously had some severe rigors, and three days afterwards first perceived the swelling; at this time, was under the care of the physician as an out-patient, on account of pain in the loins and stoppage of menstruation.

Abscesses in the situation here indicated derive their chief importance from the circumstance of being often connected with disease of the deeper seated parts; and the first question that presented itself in this case was, whether it was consequent upon any disease of the abdominal viscera, was dependent on diseased bone, or was connected in any way with her confinement, which had taken place some months previously. The latter was her own notion; but although abscesses originating in inflammation following labour occasionally make their way here from the pelvis, there seemed no sufficient evidence that the present case was one of that description. There had been no symptoms indicative of ulceration or obstruction of the intestinal canal, or any affection of the kidney. The pain in the loins, and some difficulty which she had experienced in stooping, created suspicion that there might be disease of the spinal column, but careful examination detected nothing confirmatory of this; and although all apprehension on this head was not thereby removed, yet there were other circumstances encouraging the hope that the abscess might not be connected with diseased bone. In cases of the latter kind the swelling usually forms slowly, and the integuments over it long retain their natural colour and temperature; in fact, the abscess is of a chronic character. Here, the case was different; only a week had elapsed from the first detection of the swelling and the

occurrence of those appearances which it presented on the patient's entrance.

It was determined to treat it as an acute abscess, and two days after admission a free incision was made into it, not towards Poupart's ligament, the lowest parts in the upright position of the body, but close to the crest of the ilium, in the situation which would be the most dependent as the patient lay in bed, or which, by placing a pillow under the buttocks, could easily be made so. The matter discharged was rather thin, and as it evidently came from a deep situation, I was not free from apprehension that we should have inflammation of the cyst of the abscess, so often occurring in chronic and symptomatic abscesses, and occasioning the most severe symptoms and fatal results. Fortunately our fears were not realized; no constitutional disturbance took place. Yet the discharge continued copious for some time, and meat, beer, and tonics, were required. A fortnight after the collection had been opened, the probe introduced passed downwards and inwards in the direction of the pubis, above and parallel to the upper part of Poupart's ligament. With the view of aiding to the closure of the cyst of the abscess in this situation, pressure was applied by means of the pad of a truss; but this could not be borne. Slitting up the parts in the direction mentioned was considered, but as this would have entailed a division of the muscles under which the probe passed, it was not deemed prudent thus to weaken the resistance of the abdominal parietes. The opening already made was therefore kept carefully free—the patient was so placed as to keep this almost invariably in the most dependent position; and pressure by the hand was made twice daily on the surrounding parts, in order further to obviate the risk of bagging. Under these means, and the regimen adopted, the discharge gradually abated, so that in six weeks it had entirely ceased, and the wound cicatrised. The patient then got up, but was kept ten days longer in the house, when she was discharged free from complaint. The case may be viewed as one of acute abscess.

The next case I have to notice is one of

Abscess of the Labium Pudendi.

Clara J., æt. 26, married: admitted Oct. 29, 1844. A collection of matter occupied the posterior part of the right labium, projecting on its inner surface and obstructing the entrance of the vagina. Soon after marriage, and when she became pregnant, an abscess formed in this situation, was opened by a surgeon, and it healed soon afterwards. When she had quickened it again collected, burst of itself and closed. It formed a third

time during her pregnancy, and was again opened by her surgeon, and it healed a month previous to her confinement, about eight months since. She suffered great pain in the parts whilst she suckled, but no swelling was observed again until about two months ago.

An examination was made so as to ascertain, if possible, by the finger in the vagina, if any hardness, tract, or sinus existed, leading upwards by the side of this passage, but none could be detected. It was probable, therefore, that the repeated collection of matter in the same place might have arisen from the cyst of the abscess never having healed from the bottom. A very free incision was therefore made into it; and no sinus running from it having been discovered by the probe, lint was introduced into it, and renewed, so as to secure the healing from the bottom, which was effected in a fortnight.

Abscess of the Side.

Wm. Johnson, æt. 32, admitted Nov. 19th, 1844. There was a large swelling, with fluctuation, occupying a space the size of the extended hand on the right side, a little under the axilla. The integuments covering it were red from the effects of a blister applied a week previously. At that time he asserts there was no swelling, which only appeared three days after. The blister was applied on account of severe pain in the part, which commenced a fortnight before, which pain was preceded by three severe rigors, each followed by heat and sweating. Examination of the part could scarcely be borne from the severity of the pain. He looked pallid, his face was flushed, his skin hot, and pulse frequent. He was thirsty, the tongue was covered with a thick yellowish creamy fur, his appetite was gone, and the bowels were purged. The cavity of the chest, and its contents on this side, appeared to be sound. There was no appearance of disease of the spine.

In the absence of all evident cause for this abscess, for undoubtedly it had preceded the application of the blister, my mind recurred, from its unfortunate termination, to the last case of extensive abscess, in nearly the same situation which I had observed. This was in the spring of the present year, in a fine young Irishwoman, who came into the hospital expressly to get rid of what she supposed was a large tumor, which had been growing for the last twelve months. But although the skin covering it was pale, and of not more than the natural temperature, and although it was quite free from pain, yet fluctuation was present in it throughout. It was an abscess, but no cause could be discovered for it in the neighbouring parts, external or internal. It was freely opened, and a large

quantity of serous pus evacuated. Considerable constitutional disturbance succeeded; fever, and pain in the side, with cough, but these yielded to leeches and salines, and, with the exception of the discharge, matters had greatly improved, when, a fortnight afterwards, severe symptoms of inflammation of the same side of the chest, bronchitis, and pneumonia, supervened: under these the patient sunk six weeks from her admission.

On examination *post-mortem* the cause of this *chronic abscess* was discovered to be necrosis of the fifth and seventh ribs, where they are covered by the scapula, from their angles forwards, about two inches of each. This case will afford you additional proof that it is not without reason we look with anxiety at all cases of large abscess of the trunk, especially when chronic and of obscure origin, lest they should be symptomatic; that is, dependent on other and more serious disease.

In the case of our present patient, Johnson, although apparently one of *acute abscess*, you will recollect that my anxiety led me, notwithstanding, to introduce my finger into the opening which I had made to evacuate the matter, to pass it upwards to its full length towards the axilla, backwards to the scapula and all over the ribs, so as to satisfy myself that there was nothing more present than the irregular surface of an acute abscess. The febrile symptoms and constitutional disturbance now subsided, and under simple remedies, mild aperients and salines, the discharge, at first copious, gradually abated, and in a fortnight it had entirely ceased, and the opening healed. Three weeks from his entrance the patient was discharged well.

I have just now alluded to diseased bone as a cause of abscess. The case to which I shall next refer possesses a two-fold interest, as exhibiting the condition of the hip-joint after being the seat of continued disease for fifteen years, and giving occasion to frequent abscesses, but more particularly from its having afforded you an opportunity of witnessing an instance of death arising from suppression of the secretion of urine, and of observing the mode in which this fatal result ensues from the retention of the urea in the system, and its action upon the brain.

Disease of the hip—Complete suppression of Urine.—Coma—Epilepsy—Death. Urea present in the serum contained in the ventricles of the brain.

Ann Lovegrove, æt. 24, was admitted Oct. 29, on account of severe pain in the left hip. There had been disease of the joint since the age of nine, abscesses from time to time forming, discharging and slowly heal-

ing. There were now two sinuses in front of the joint, which had existed for two years. Pressure on the trochanter greatly aggravated the pain already existing, and there was a *dematous swelling* of the soft parts in this situation. The thigh was considerably flexed on the pelvis, and fixed thereon, the slightest motion not being perceivable in the joint. Until within the last six months she did not suffer much pain in the hip, but up to this time she had used a crutch. She then adopted a high-heeled and thick-soled shoe, and she attributed the pain since experienced to the greater use of the limb consequent upon the adoption of the shoe, and the rejection of the crutch. She had had diarrhoea, with purging of blood, for the last nine days; tongue very red.

Great difficulty was experienced in moderating the diarrhoea, the medicines for a time succeeding, and then losing their effect; this was the case with the combination of Dover's powder and Hydrargyrum c. Creta; with the chalk mixture, &c.: the most efficient means were found to be the occasional injection per anum of laudanum and starch, and lime-water taken by the mouth. It was hoped that rest and fomentation would suffice to relieve the pain in the hip; but not so: its permanence and severity preventing sleep, led to the application of a caustic issue behind the trochanter, which afforded immediate and durable relief.

You will recollect that I repeatedly pointed your attention to the state of the patient auguring unfavourably, from the pertinacity of the diarrhoea, and the red tongue. But on Tuesday, the 28th of Nov., just a month from her entrance, you will remember that I particularly directed your attention to a new phasis in her case: the preceding day I noticed that she was slightly drowsy, but this was now more marked; and you will remember how, that in rousing herself to our questions, she opened her eyes, and turned her head, exactly like a person awaking from a very deep sleep—that she answered slowly and listlessly, that her pupils were dilated, and that she had a very vacant expression of countenance. Her hands were cold, and very slightly oedematous; there was no pulse to be felt at the wrist. On the previous day I had ascertained upon inquiry that very little water was made, and on passing the catheter only a teaspoonful was obtained, then eighteen hours afterwards; but a table-spoonful was contained in, and withdrawn from, the bladder. On exposure to heat, three-fourths, perhaps seven-eighths of this, was converted into coagulated albumen.

The cause of the head symptoms was clearly the arrest of the secretion of urine; but how was this to be restored? It was proposed to

give Tinctura Lyttæ, but the very red tongue was thought to render this inexpedient; the *Haustus Terebinthinæ* was given in its stead, and a mustard poultice placed across the loins. The state of the circulation forbade more active treatment directly to the head, but it was shaved, and a blister applied.

By the evening of the same day, (*viz.* the 28th) the patient no longer replied to questions, she could not be roused, the stupor amounted to coma, and the pupils were observed to be contracted to a point. On the morning of the 29th, she had an epileptic fit, another in the middle of the day, when the breathing was found slightly stertorous, with puffing out of the cheeks; she had four or five more fits before she expired in one of these at four in the morning of the 30th. No urine was secreted during the last forty hours.

On examination, the head of the femur and acetabulum were found ankylosed externally all round, the neck of the former bone having undergone considerable diminution of its length, but the consolidation of the two bones was so complete that it is in possible, as you may see, to determine the precise limits of each. A portion of the osseous uniting medium is bare. On making a section through the acetabulum and neck of the femur, in the direction of the latter, the osseous ankylosis, though complete, and of solid bone externally, so that it is impossible to say what is femur and what acetabulum, is, as you will observe, somewhat defective in the centre. Here, in a situation corresponding, as it were, to the centre of the joint, we find a cavity in which is lodged a piece of dead and loose bone. From this cavity, you observe, we can trace a narrow passage through the surrounding uniting bone in the front part of the joint, a sort of cloaca we may call it, and presenting a state of disease sufficiently accounting for the long continuance of sinuses in this situation, and the persistence of the other symptoms of hip disease.

The kidneys were rather above the natural size. On stripping off their investing coat, they presented a mottled appearance, and tuberculated surface; the colour of these tubercles, which are very numerous and agglomerated, being, as you observe, of a dirty yellow, or straw colour. On a section being made, this colour was found to occupy almost the entire of the cortical, or secreting part of the organ, which thus presented a well-marked instance of what is called Bright's kidney. There is a cyst in one of them, which is common enough. Usually in this form of disease the surface of the kidney is granular; here it is not so, but tuberculated; but this we may probably attribute to the more advanced stage of the disease. In confirmation of this, I may state

that I learn from our apothecary, Mr. Corfe, that this young woman was in the physicians' ward a year and half ago, when she had incontinence of urine, and the urine was albuminous, the disease no doubt then existing.

The bladder contained no urine, it was quite contracted, its coats were somewhat softened. On opening the head, there was but little serum in the arachnoid; on slicing the brain, the red points were unusually numerous; about two ounces of serum were found in the ventricles.

Urea has been detected in the serum of the blood of those labouring under albuminuria, and suppression of urine, by Christison, and others, and the same substance has been found in the serum secreted into the ventricles of the brain. But this was deemed too good an opportunity of confirming this, not to take advantage of the able assistance of Mr. Fownes, our lecturer on chemistry, for this purpose. Accordingly a portion of the serum contained in the ventricles of the brain was handed to him, in which he readily discovered the presence of urea. His manner of proceeding was this, he informs me. He first got rid of the albumen which was present in the serum in large quantity, by boiling, filtering, and evaporating to dryness; he then applied a little water to the residuum, and adding some nitric acid to it in a watch glass, it was allowed to stand over night, and in the morning he found crystals of nitrate of urea.

The urea retained in the blood seems to act as a poison in these cases, and although, when these effects ensue, we do not well know how to counteract them, yet having had so striking and well-marked an example of the symptoms which it produced, you will at least be prepared, should a similar case occur to you, to forewarn the patient's friends of his or her danger, and thereby tend to preserve your own character.

In this case of Bright's kidney there was no dropsy. The diarrhoea which existed was probably, however, dependent in its origin on the renal disease.

INFLUENCE OF THE NERVES ON SECRETION.

To the Editor of the Medical Gazette.

SIR,

WHEN a series of phenomena have been traced up to an ultimate fact, as those of fever up to the irritability of the blood-vessels, and the inferences arising from it have been applied and fully carried out into practice, the subject is complete, and very little can be added

to it; because so long as the ultimate fact remains established, as we cannot go higher than or beyond it, no farther extension of principle can be obtained, and, consequently, no great or comprehensive improvement can be made, and not much even in matters of arrangement and detail. It seems to me that the theory and practice of medicine are in this condition at the present time, that all the practical benefit to be derived from cultivating the science of medicine (i. e. what is now called science) has been obtained, the soil is exhausted, and consequently the labour now is great, the profit very small. Thus we find one author as the result of a long investigation, discovers inflammation to consist in "*a peculiar perversion of nutrition or secretion*;" another spends years in examining the blood, as if disease could be cured by putting into the stomach this or that ingredient, which he might find deficient. Another revives and produces as a novelty, the doctrine of vibrations; a fourth publishes a series of drawings of morbid growths and depositions, as if the contemplation of them would throw a new light upon the cause of production. Seeing that in all these instances, and in many more which might be mentioned, the labour of able men is so great, and the gain so small, we might conclude that nothing more could be done, did not the unsatisfactory state of the *practice* of medicine prevent the possibility of our being contented with it.

I have long been convinced that the true reason why so much patience and zeal have of late years been expended to so little purpose, is, because the present doctrines being founded on a *supposed* ultimate fact, have not admitted of any extension of principle, and I have been sustained with the expectation of my labours being crowned with happier success by observing, that in tracing the contraction of the muscular fibre, and the maintenance of the secernent function up to the nervous system, thus getting beyond the ultimate facts, we might advance a step higher in the gradation of causes, and obtain the requisite extension of principle. The controversy respecting the doctrines of irritability may be likened to the letter Y, the two extremes of which, though wide apart, at first gradually approach each other, and

unite in a single stem; so the two parties to this dispute, however at variance in their principles, concur at length in adopting the same practical views. It seems to me that this diversity at the commencement, and unanimity at the conclusion, have had the effect of confining the interest of the question entirely to those engaged in carrying on the discussion, because the great mass of the profession being practical men, have naturally looked to that part of it which more particularly concerned them, and finding the same treatment recommended by each party, have considered it a matter of perfect indifference which might be in the right. Indeed, I am inclined to believe that although systematic writers have been obliged to keep their doctrines connected, and as much as possible consistent, each practical man has deemed himself at liberty to form his own physio-pathological creed, and that this in most instances is a strange mixture of the leading points of each side of the controversy. I should never have troubled myself, however, to interfere with this anomalous state of things, had I not hoped, by showing what may be gained by an extension of principle, and by bringing it to bear legitimately in improving the treatment of disease, to excite a permanent and abiding interest in physiological questions in the minds of practical men.

The first great fact on which I wish to fix the attention of the profession is that which I brought forward in my last letter, viz. that the body cannot live without the brain. The second is very similar to it, viz. that when the communication of a *part* with the brain is completely cut off, it also dies. There is a completeness in the entire separation of a part from its nervous connexion with the brain, which does not belong to the division of one or more branches only; the one gives a perfect, and the other only an imperfect result; if we can understand the first, there will be no difficulty with the second. It is observed that inflammation and disorganization invariably intervene between the division of the nerves, and the final death of the part supplied by them. Analogous phenomena are remarked in some of the severer forms of rapid disease, where fever and disorganization intervene between the health and death of the whole body;

hence the application of the term putrid to some of the graver kinds of fever. Now it is quite certain the inflammation in the part is caused by the division of its nerves, and consequently it is fair to infer that some cause or other acts in an analogous manner upon the whole nervous system in producing fever; and as all disease may be ultimately resolved into the question of a greater or less degree of inflammation, or of fever (as I have already said on a former occasion, when endeavouring to show how absolutely necessary it was to establish sound doctrines on these points in a cyclopædia or dictionary of practical medicine), it becomes morally certain that there is no way of arriving at a deeper insight into disease except through a more perfect knowledge of the functions of the nervous system. From what has been said, it follows that the one thing needful is such an amount of information respecting the office of the brain and nerves in maintaining life or health as shall enable us to understand what amount of injury is inflicted on a part by the division of the latter, what it loses, in short, by its communication with the brain being interrupted. The only functions of the nerves which have as yet been investigated with success are those relating to volition and sensation; and many have appeared to think that these points being ascertained no farther information was necessary. It seems to me, however, that a little reflection on the nature of these properties, considered in connection with the actual arrangements and distributions of the various nerves to the several parts and organs of the body, and the fact that a part dies when all its nerves are divided, discovers a great void still remaining to be filled up. Nerves of sensation are invariably united (except those of the special senses) either with nerves of volition, with ganglial nerves, or with both. Wherefore do we find this constant union of different kinds of nerves? Volition and sensation are properties entirely distinct from, and independent of, each other; consequently these functions would be quite as well provided for by nerves having no intercommunication. No consideration, therefore, of properties distinct, and even opposed to each other, can possibly lead to an explanation of the

reason why nerves endowed with them should be so constantly united. But if the more obvious and acknowledged functions of the nerves are such that their union is not required on that account, may there not be some other function as distinct from volition and sensation as they are from each other, and yet not incompatible with them, which imperatively demands and cannot be carried on without such a disposition? These questions refer us back to the consideration of the facts before us; and here, when we see not only muscles, but bones, ligaments, and joints—parts neither capable of moving, nor, under ordinary circumstances, very sensitive—supplied by anterior and posterior nerves, and perceive also that muscles, bones, and ligaments, all become disorganized and die together when the nerves are divided, we can scarcely avoid the conclusion that the nerves do subserve another function, and that in all probability it is the performance of this other function which renders it necessary for the nerves to be united as we find them. An author who occupies a conspicuous position among the writers of the present day maintains the opinion, that the secret function is independent of the nervous system, although liable to be influenced through it. It would be difficult to recognize even a trace of the wise beneficence of our great Creator in such a disposition as this doctrine implies, because since all mental emotions interfere with and interrupt secretion, and may even be so intense as to kill instantaneously, the influence is only exercised for evil, which would be a solicism not to be found in any other part of the creation. According to this view, either Dr. Alison is wrong, or God has in this instance departed from his universal law. If such be the tendency of the doctrines taught by one of the best authorities of the present day, there can be no doubt but that a good work on physiology has yet to be written. Physiologists have never yet considered more than half, and that the least important half, of the functions of the nervous system; their attention has hitherto been almost solely fixed and concentrated upon volition and sensation, functions which relate only to the convenience of the body, as if the whole subject were comprised in them :

these are doubtless important functions, but that which maintains the life is unquestionably of far higher consequence; and yet no one knows any thing about it. I was in hopes I should have been able to enter upon the question of the secret function of the nervous system in this letter, but I find I must defer it to a future opportunity.

I have the honour to be, sir,
Your obedient servant,
J. W. EARLE.

Cheltenham, Dec. 3, 1844.

ON THE PRESENT STATE OF THERAPEUTICAL INQUIRY.

BY JAMES ARNOTT, M.D.
Physician to the Brighton Dispensary.
(*For the London Medical Gazette.*)

IT is remarkable, that the branch of the science of medicine which has regard to the cure of disease, and which is obviously its most important branch, should, at the present time, be the most neglected. Amongst the various causes which may be assigned for this neglect, the principal is the extreme difficulty of establishing any improvement in medical practice, or even of drawing the attention of the profession to it, and inducing them to make a trial of the newly proposed treatment. The proposer of this finds that his assertions are received with incredulity; and his new remedy is either not tried at all, or is tried so imperfectly as to throw discredit on his judgment, if not on his veracity. Unless he be one of those whom accident has placed in charge of a large public medical charity, and who have consequently many professional witnesses of their proceedings; or unless from other circumstances equally accidental, and often quite independently of his merits, he has become what has been termed an authority: this neglect will surely be the fate of his improvements, excepting, perhaps, such of them as are founded upon physical principles of easy comprehension, or which promise relief in diseases for which no remedy of any kind has hitherto been found.

The microscopical and pathological anatomist, the investigator of animal chemistry, and the physiologist, are

very differently situated in respect to the reception of the result of their labours by the public. They can produce demonstrable, undeniable, facts in proof of their assertions; and they are cheered in the prosecution of their respective studies by the acknowledgment of the advances which they have made in science.

Amongst the causes of the unpopularity of therapeutical investigations, the perfection to which this department has attained, and the scanty harvest of discovery that can consequently be hoped from its cultivation, cannot assuredly be reckoned. On the contrary, of all the branches of medical science, therapeutics is the least advanced. How few diseases are there, upon the best mode of treating which, medical men, not only of various countries, but of the same country, have generally agreed! How many for which it has been generally acknowledged that no remedy has hitherto been discovered!

Inflammation is the proximate cause of the greater number of acute and severe diseases, or the cause at least of the dangerous local affections occurring in the course of these; and of no morbid condition is the remedial treatment supposed to be better known, or more certainly fixed; yet even here how various are medical opinions about the proper means to be adopted, and the degree to which they ought severally to be carried!

Blood-letting is the principal remedy of inflammation. But its advantage has been questioned by the most accurate observer of the day, M. Louis, even in pneumonia; although pneumonia and venesection are the very disease and remedy which have usually been mentioned together as the best evidence than can be adduced of the efficacy of the healing art. Few will be found of the same opinion with M. Louis on this point; yet as a proof of how little is yet known of the proper extent to which the abstraction of blood should be carried, and of the proper manner in which it ought to be made, in this and other equally severe inflammatory diseases, it still remains the usual practice of physicians to prescribe a determinate quantity to be drawn, without observing the effects of the operation until after a considerable period has elapsed; notwithstanding the general admission that the effect of

blood-letting is very materially influenced by the mode in which it happens to be performed, or the manner in which the blood happens to flow from the vein. In former times, the observation of the immediate effects of venesection was deemed of more importance than the quantity drawn; and Sydenham mentions with approbation, the practice of a surgeon in his day, who allowed the patient's blood to flow upon the ground, while he exclusively watched the effects of its loss on the system.

Some improvement, I think, may be made, with this view, in the operation of venesection. If the bandage by which the veins are compressed were tightened or loosened by a small tourniquet screw, the force of the stream of blood might be regulated with almost as much ease and precision as that of a jet of water is regulated by a stop-cock. Although this addition renders the *apparatus* used a little more complex, it simplifies the *operation*.

Blisters, as a remedy of acute inflammation of the viscera, are condemned by many, as being more calculated to aggravate than relieve; with others they form a part of their invariable routine.

Purgatives constitute a principal part of the treatment of febrile and inflammatory disease in this country; in France they are generally regarded as the pernicious irritants of the gastrointestinal mucous membrane.

Emetic tartar is rarely employed by English practitioners in repeated large doses, so as to act as a sedative on the system. In Italy it is a substitute for the lancet.

Cold applied externally constitutes with some an important part of the treatment of inflammation, particularly when affecting the head, joints, or external parts; and it has occasionally been extended to similar affections of the throat, chest, and abdomen. Other practitioners consider it more likely to cause injurious determination to the morbid part than to relieve its oppressed vessels. Much of this discrepancy, however, has, doubtless, arisen from the very imperfect mode (as will be explained in a subsequent section) in which cold has hitherto been applied. If cold, instead of being constantly applied, is applied by intervals, it is more likely to stimulate by reaction, and really to increase the

temperature, than produce the contrary effects.

Still more undecided than any of the above opinions is that on the constitutional effect of mercury as a remedy of inflammation. This powerful drug, the extensive use of which as a remedy for acute inflammation as well as fever originated in our eastern colonies (but where it now appears to be estimated as much below its real value as it was formerly above it) is deemed by many not to be inferior in efficacy to bleeding, when employed in sufficient quantity. A very different opinion is entertained upon the subject by others. The distinguished professor of the practice of medicine in the University of Edinburgh, for instance, declares that he has seen "the symptoms of inflammatory diseases more frequently aggravated or transferred to another part, on the mouth becoming affected with mercury, than relieved."* Although this extreme opinion may be classed, on account of its singularity, with that of M. Louis on bleeding in pneumonia, it must still be admitted that many practitioners continue to participate in the vulgar prejudice against mercury; and the mode of administering the remedy in urgent cases still remains very imperfect. The necessity that is admitted for the speedy application of other remedies, or rather for the speedy production of their respective influences, can scarcely be supposed to be the case with respect to the use of mercury, when we daily witness patients sinking under diseases for which the practitioner is administering mercury, with the full expectation that its complete action would save, and yet administering it in a way the least likely to effect its complete action speedily, and in time to save. However weakened or torpid the power of absorption may be in the stomach and upper part of the intestinal tube, it is rarely that mercury is exhibited otherwise than by the mouth, or by friction on the skin. It is more than twenty years since I induced mercurial salivation, where there was no hope of succeeding in this from the usual, and perhaps milder methods, by applying lint soaked in a solution of the bi-

* The Library of Medicine, vol. i. p. 111.

chloride of mercury to a portion of the skin from which the cuticle had been removed by a blister. This is not the only mode in which the system may be speedily affected by mercury, in cases where the urgency of circumstances authorises the use of severe remedies; and that these modes should have been so completely neglected, can only be accounted for by supposing that erroneous notions upon the *modus operandi* of mercury have prevented their use. By introducing the drug into the system more gradually, a more general effect has been supposed to be produced; upon which general effect exclusively the remedial efficacy has been thought to depend.

The above observations have reference to the general treatment of a large, and by far the most important class of diseases: if particular diseases be considered, the present state of therapeutics will not appear to greater advantage.

Take rheumatism for an example—the most common disease of a severe character which we have to treat in this country, and consequently one on the management of which, it might be supposed, there would be little difference of opinion. There are at least half a dozen very different modes in use of treating cases of rheumatism, of precisely the same character. One practitioner, considering the disease to be purely inflammatory, trusts principally to the lancet, employing or eschewing mercury, according to his notions of it as a remedy of inflammation. Another confides exclusively in powerful diaphoretics. Those who acknowledge a specific virtue in colchicum require little other assistance; while others, with Dr. Haygarth, fancy they find an equally powerful specific in bark. Opium and nitre have each their respective advocates as the sheet-anchor to be relied upon. And while certain practitioners of the eclectic school variously combine the above remedies, or appropriate them to what they consider suitable cases, a few expectants, or homœopathists, (for there is no great difference between these sects,) may be found, who leave the cure to the unaided or unopposed operations of nature.

Although it may be deemed a departure from the subject of therapeutics,

yet as bearing immediately upon it, and strongly influencing it, there may be no great impropriety in briefly advertent to the great uncertainty that exists respecting the *modus operandi* of remedies; and in bringing forward as an illustration of this, the various opinions that are held on the action of mercury, the last mentioned of the principal remedies used in inflammatory disease. In the opinion of some, mercury given to the extent of affecting the system acts beneficially, by stimulating the absorbents; another explanation is, that it equalizes the circulation, or restores its balance. Some think that its curative agency consists in the general excitement of the secretions, or in other words, in being a general evacuant; and there are still a few who deem its action advantageous by destroying the poison from which the disease originated, or by ejecting it from the mass of circulating fluid. Many conceive that mercury removes the morbid action constituting disease, by exciting another action, which supercedes it, on the principle that two morbid actions of different kinds cannot co-exist; and others adopt the similar idea that a general counter-irritation is produced by its powerful and diffused action operating beneficially in causing a revulsion from the morbid part. It is to be regretted that an explanation which has lately been advanced, namely, that it dissolves the blood, did not occur to Boerhaave, or his disciples, as by ensuring its general adoption, from its applicability to the reigning doctrines in pathology, it would not only have led to an earlier and general use of a valuable medicine, but long ere now, and as the fruit of so extended an experience, some certain principles regulating its use would have been arrived at. Many years ago, and when I had ample opportunity of witnessing the extraordinary effect of severe mercurial ptyalism, (sometimes where there is constitutional peculiarity, produced by a few grains of mercury,) in quickly putting a stop to the symptoms of the acute and rapid diseases of warm climates, I was led to the conclusion, that while it might have several other operations of an auxiliary character, its local effect on the mouth and salivary glands was mainly instrumental in effecting the

cure, on the common, and universally admitted principle of counter-irritation. For none of the means commonly used to produce counter-irritation or revulsion, as blisters, &c., are half so violent, or half so continued in their operation, as the degree of mercurial pytalism alluded to; nor as regards their locality, can any of these be so well applied to control the centre of the nervous system, or the gastro pulmonary mucous membrane. Would it not, therefore, be a strange anomaly, if a counter-irritation so powerful, so continued, and so happily situated, should not have, not only the efficacy of other counter irritants, but an efficacy much greater, and in some degree proportionate to these advantages over them? If there be any truth in this view of the subject, we should be led to expect some advantage, similar to that proceeding from this operation of mercury, from exciting a severe and continued irritation in the same situation by more direct, and, in other respects, less noxious measures; and from my observations on this point, I have seen abundance of reason to regret, not that the direct sialagogues hitherto employed have become obsolete in the practice of medicine, for their practice was too mild to be of much service, but that articles of similar, but much stronger local operation, should not have been used as their substitutes.*

* In questions of medical jurisprudence the subject of the certainty of medicine comes prominently before the public; and it has ever been a favourite expedient of the prisoner's counsel to invalidate any medical evidence against him, by exposing the difference of medical opinion upon the points at issue. For the sake of the character of therapeutics, therefore, it was fortunate that in the late remarkable trial of Belaney for the murder of his wife, there chanced to be so much unanimity displayed respecting the remedies which ought to have been adopted as antidotes to the poison which she had taken; but I cannot help saying that it was strange, considering the great importance of the opinions on this point in the particular case referred to, that they should have been so decidedly expressed.

It is doubtful, in the first place, whether the antidotes which have been found effectual in the case of the poisoning of animals would be equally so when administered to the human subject; and the statement made by one of the medical witnesses to the effect, that the practice which ought to be pursued in cases of poisoning by prussic acid is well established and universally taught, I do not think quite correct. In the popular French class-book, for example, the "*Elémens de Pathologie*," by MM. Roche and Sanson, published ten years ago, no allusion is made to any of the remedies (and they were four in number) which the medical witnesses at the trial spoke of as being so effectual!—*Nouveau Elémens de Pathologie*, troisième édition, vol. v. p. 689.

Enough has been said in proof of the very defective state of therapeutics. But when such deplorable uncertainty exists respecting the treatment of the most important class of diseases, and the mode of action of the most important of our remedies, should the attention of the promoters of medical science be so exclusively directed, as it is at present, to its auxiliary or collateral branches?

Among these, none deserves a higher place than morbid anatomy; and great have been the advantages derived from the ardent prosecution of it during the last thirty years. The existence of diseases has thus been ascertained, which, from the similarity of their symptoms to those of other diseases, might never otherwise have been detected; and analogies in the nature of diseases previously supposed (judging from their symptoms alone) to be of a different character, have been discovered, leading to analogies in their treatment; or to the adoption of remedies for certain diseases which experience had proved to be useful in diseases to which they have thus been found allied. Our knowledge of the symptoms of disease has been advanced from the same cause. Aware of the existence of the different diseases, we have been taught to examine the morbid indications more closely in order to discriminate their characteristic symptoms. It was probably in consequence of Laennec's pathological investigations into diseases of the chest that he was led to invent the admirable mode of detecting them by auscultation*.

* Auscultation, though seldom fallacious in its intimations, may, if too much relied upon and other symptoms be neglected, lead into error by its silence—it may deceive, not by misstatement, but by concealing the truth. I was lately called to see a boy in an advanced stage of pneumonia, in whom, during the last four days of his life, no sign was perceptible on the most careful auscultation excepting a slight dullness on percussion at the lower part of the right lung. Not even the natural respiratory murmur was heard. On examination, post-mortem, nearly a fourth part of the right lung was found hepatized, and the various other preliminary changes were perceptible in other portions. It would seem that the uneasiness caused by inspiration prevented the patient from inhaling a sufficient quantity of air to elicit the ordinary sounds. But even here, the very absence of the usual respiratory murmur was a negative sign of some importance; and had the child been compelled to make a full inspiration by obstructing his breathing for a moment or two, the usual declaration of disease by abnormal sounds would probably have been made. In this case, fortunately, the general symptoms were too well marked to endanger error in the diagnosis.

Yet it cannot be denied, that while, on the one hand, many zealous pathologists, in tracing with so much care the marks which disease has left on the animal structure, appear almost to have forgotten that their labours are only useful as subsidiary to therapeutics; on the other hand, error has been committed by a too hasty application of supposed pathological discoveries to medical practice. Sir Benjamin Brodie, for example, observing in his dissection of diseased joints that the synovial membrane presents, in many instances, an appearance different from what is usual after chronic inflammation, assumes that a peculiar disease has existed in such cases; and concludes, because this disease has not been cured in the individuals whose limbs he had examined after amputation, that it is incurable. On this supposition that the disease is incurable, he advises that attempts should not be persisted in to save the limb at the risk of the patient's general health; notwithstanding his admission of the difficulty of distinguishing this peculiar affection from cases of chronic inflammation accompanied with thickening of the parts, and effusion. The supposed accuracy of diagnosis which, it is boasted, has been lately attained in diseases of the joints, has, I conceive, led to many errors in their treatment. An example may illustrate this more briefly and satisfactorily than any argument. About three years ago, several eminent surgeons were consulted on the case of a little boy, in whom I was much interested, suffering from a chronic and deep-seated disease of the ankle and heel. As might have been expected, from the present state of our knowledge of these affections, there was considerable diversity of treatment recommended; though there was little hope, from the supposed nature of the case, held out of recovery. It was determined, however, to adopt the measures that experience has proved to be useful in inflammation, whether acute or chronic, in parts of analogous structure, and an apparatus was contrived by which these measures might be applied to the joint. By means of a plaster cast of the limb, a light and open metallic cage was constructed, accurately fitted to the leg and foot, but considerably wider than the diseased part, and

opening by hinges, by which, at the same time that the joint was kept immoveable, the appropriate dressings, &c. could be easily applied. While the heat of the part was above the natural standard, indicating the existence of acute or subacute inflammation, the temperature was regulated by surrounding the joint with a bladder, through which a current of cold water was allowed to pass; and afterwards a moderate support was given by equable pressure. The usual measures were adopted to improve the general health as well as to remove the existing strumous diathesis; and in little more than twelve months the perfect use of the joint was restored.

It was, I conceive, to his having made no vain attempts to discriminate between the chronic deep-seated affections of the joints, that Mr. Scott, of Bromley, principally owed his remarkable success in their cure. He treated them all as chronic inflammations, and secured the great requisite in the treatment, namely, perfect quietude, by covering the joints with a mass of plasters and bandages. The great improvement that has taken place in the treatment of these diseases within the last thirty years is mainly to be ascribed to the full and universal adoption of this principle; and in criticising the composition of Mr. Scott's plasters and various medicaments, it must not be forgotten that whatever evil may at times have proceeded from this, and from the retention by the dressings of the morbid heat, it was much overbalanced by their keeping the joints perfectly motionless.

With morbid anatomy, animal chemistry and physiology have made rapid advances: and it cannot be denied that a certain degree of benefit has accrued therefrom to the practice of medicine: but, considering the low state of therapeutics, would it not be well, for those at least who, from their connexion with public institutions, have the requisite opportunity, to lay aside for a while their magnifying and precipitating glasses, and to stop the experimental torture of animals, for the purpose of dedicating their leisure to the investigation of the effect of remedies upon disease? It is true that by the cultivation of the auxiliary sciences, therapeutics will be eventually ad-

vanced, and probably to a material degree; but in the meantime the present generation suffers: and considering how little has hitherto been effected by the theories built on these sciences, we cannot indulge a very sanguine hope of any great advantage from them being speedily attained.

It has indeed been but in a very slight degree to any such theory that the practice of medicine is indebted for whatever progress it has made. A statement of the real sources of what is useful in therapeutics, and an inquiry into the means by which these may be rendered most available for its progress, will constitute the subject of the remaining part of this paper.

[To be continued.]

ON THE
SEAT OF HEADACHE,
AND ITS
IMPORT IN DIAGNOSIS.

By T. WILKINSON KING, F.R.C.S.E.

(For the Medical Gazette.)

Internal Sensibilities. Pains certainly referrible to the skull and its membranes. Not in the brain, except in especial lesions of sensitive nerve-tracts. Distresses referred to the periphery. Conclusions.

THE pains of the interior of the body are less distinctly located than those of the exterior, by reason of the absence in the former of that habitual and correcting experience which the senses in general supply to the latter. We are easily deceived in feeling with parts of the hand in an unusual posture; practice, on the contrary, makes even the foot of an armless child almost as ready with mobility and with tact as the hands should have been.

A boy who died in Guy's Hospital described a pain in the left loin; the disease was found to be inflammation of the right kidney. There was no left kidney, nor other disease near the seat of pain, to substantiate the description.

The viscera of the trunk being only attached behind may afford some reason why so many pains are, too hastily, referred to the back. It is only by trying with the hand that the mind

learns to locate a pain in the side, and this is done but indefinitely.

Running after a meal causes pain in the right or in the left side, but its actual seat would seem always to be near to the cava or the porta, since pressure on either side, or a firm belt, are equally calculated to relieve it. The pain of peritonitis, of pleuritis, of pericarditis, or even of arachnitis, is an accidental attendant, often absent, and bearing no proportion to the state of the serous membranes. It seems to depend on the inflammation of the sensitive tissues situated exteriorly.

The seat of pain in cases of pleuritis may have very peculiar reference to the part inflamed. An abscess in the apex of the lung may involve the first dorsal nerve, and produce great uneasiness towards its distribution. The next lower intercostal nerves, if invaded posteriorly, would affect the back of the axilla; and nerves which come out between the cartilages of the true ribs may seem to be the seat of disease which is really in the larger trunks from which they are derived.

It is a curious instance of false perception that tickling the umbilical pit refers a sensation to the generative organs; but a little experience corrects this erroneous impression, as the part becomes more accustomed by repetition of the experiment.

A lady, about fifty years of age, is subject to depression and to flatulence, and to distressing pain near the angle of the left scapula; the pain is instantly relieved by a sufficiently copious windy eructation.

A young man suffered for months from occasional anxious attacks of sharp pain within the lower ribs on the right side. He was accustomed to sit in his chair, changing his posture with the expectation of rather sudden relief. He died of a different affection. In the pelvis of the right kidney was found an oval stone, the partial roughnesses and polish of which seemed plainly to indicate that it had been liable to pass into the orifice of the ureter and back again, thus explaining the nature of the suffering. The renal pelvis was dilated, but the kidney was as yet scarcely unhealthy. How many sudden nephralgiæ may this assist to explain!

That many organs are hardly sus-

ceptible of sensation or of pain as regards their proper structure, seems a very important fact to be remarked. The heart, lungs, liver, spleen, kidney, and brain, are continually found to have been the seat of almost any kind of disorder without evident suffering. There is no pain when a small intestine is first strangulated, nor when the bowel is handled in operations. A dog is quite insensible of pain when the ileum is pinched and lacerated.

The sensations of the stomach are numerous; those of the cœcum, or at least of the parts on which it lies, are also not doubtful: and a considerable part of the end of the large intestine has its own needful sensations, and which are often even distressing. Mr. Hunter thought that by sensation he could trace the progress of an active purgative through the intestinal canal.

Headache is too common and too variable in many disorders to be very available as a specific sign. Its value of course depends on a right estimation of it, and the indications to be drawn from its absence depend greatly for their utility on a just knowledge of the diseases which may give rise to pain in the head, and on the discrimination of the parts which, when affected, do not give rise to pain*.

Lesions of the dorsal medulla, or of its nerves, induce a considerable variety of deranged feelings, as of motions, numbness, tightness, burnings, sense of coldness of common sensibility declining, or morbidly acute injury, benumbs the lower half of the body, and the upper boundary of the skin so affected aches, or with a little violence seems to burn. Certain tense cords are here oppressed, others are perhaps in a manner inflamed. All this applies with something more of intricacy to the brain itself, and it would be no little service if the various distinct examples that pathology may afford were to be collected. The function of parts, and the uses of symptoms, would admit of fair explanation by such means. It is a striking fact, however, that pains, auras, convulsions, or palsies, in one arm, occur very variously from circumscribed diseases within the opposite side of the brain,

with either head-ache, or mental disturbance.

The study of the affections of distinct parts of brain substance requires but little argument to recommend it; the advantages must follow too plainly to need illustration: my method, however, of pursuing the inquiry, may yet demand some apology.

If head-ache be confined to parts without the arachnoid membrane—if mental disorders depend on no other parts than the convolutions of the cerebrum—if lesions of motion are to be referred only to particular cords, tracts, or radiations in cerebrum and cerebellum—if the like apply to lesions of sense, then doubtless the learner will be glad to find first of all simple and distinct illustrations of these facts, and to meet with some explanation of the confusion, and of the doubt, which more complicated cases throw over the whole inquiry.

The history of strumous tubercles in the cerebrum serves to illustrate the course of signs depending on sensitive, mental, and motor parts. Varying and severe head-ache at intervals indicates vascular disorder, involving the entire head, or greater part of it, much as signs as the eye and face, and other general or distinct symptoms, do;—the solid slough of repeated capillary relapses growing by concentric layers all the while.

If severe disorder spread over the convolution, the mind errs, or mandatory ends of motor tracts being invaded, we have corresponding palsy or convulsions, or both, alternating more or less partially, or all points may be suddenly oppressed.

Tubercle in the brain being attended by the like elsewhere, almost invariably, and also by atrophy in general, seems to be the reason why the brain symptoms are kept back, and perhaps even not developed in the final fatal inflammatory seizure.

Dr. Hennis Green, in a valuable digest (*Med. Ch. Tr.* vol. 25, p. 204,) makes one-third of the cases of cerebral tubercle to commence with signs of disturbance in the centre of the brain only, *i. e.* with convulsions, &c.; but scarcely ever with head-ache, and in such cases, the mental disturbance is only, or chiefly, a final symptom.

Disturbances of motor tracts affect motion, and those of sensitive tracts

* There are of course different kinds of head-ache. That which is indicative of the deeper disorders may yet remain for future demonstration.

affect the parts devoted to sensation, increasing or diminishing sensibility, or causing disordered sensations which are erroneously referred to distant parts. These pains are not usually like head-ache, although affections of cords ultimately directed to the surfaces of the skull, &c for sensation, of course resemble disorders of these surfaces. No question exists as to the facts that affections of pericranium of the skull, and of dura mater, do cause true head-ache. The main question, perhaps, is what else may cause head-aches, as to brain disorders.

It does not appear determined that any affections within the arachnoid, and still less that any affection of the central parts of a hemisphere, produce headache.

If disease in the cerebellum at different times, or in different cases, be attended with pain in the occiput, pain in the frons, or no pain at all, we necessarily come to doubt all connexion between the existing disease and the pain. Countless capillary processes in sensitive and in other tissues have no proper trace.

For years I have expressed distrust of all the supposed seats of head-ache within the dura mater; I now propose an inquiry somewhat formally into the degree of probability attaching to this opinion. Perhaps in the main it may be made to appear that confined diseases in the brain are without pain; that pain supervenes much in proportion as these diseases extend to or approach the surface, and that circumstances of diffused capillary disorder which most certainly involve the sensitive membrane are most connected with pain.

As we have seen that experiment and disease afford very little evidence of sensibility in many of the viscera of the trunk until the external or reflected serous layer, or rather, until the sensitive tissues upon it, become acted on; so the same may apply yet more strictly with regard to brain substance as connected with head-ache.

Andral inquires (Spillan, 171) why are the cases of brain softening with head-ache completely identical with others in which no head-ache is present? This is at once the exposé of the error, and of the difficulty, and the ground for the true reply. Andral freely admits that with very similar

local disorganizations the pain may be referred to the point affected, to any other point, or to most parts of the skull variously, irregularly, and indifferently. It is, however, necessary steadily to remember that head-ache, whether in brain or bone, leaves no proper trace.

Half the cases of brain softening are unattended with mental disturbance, and as to headache the patient freely declares himself to be at ease. The most constant sign is some lesion of motion, or feeling in the extremities, so much so, that we might draw a line from pons to paries; set headache at one end, and next to this mental disturbance, and leave the remainder for the lesions of motion, and for those disordered functions of the limbs, which arise from affections of specific brain tracts.

Andral refers, with just satisfaction, diagnostically, to a remark of Rostan's, concerning the cases of hemiplegia, where the only free hand indicates pain in the side of the head opposite to that of the palsy, and we shall find commensurate advantage whenever we can connect defined and partial pain in the head with any other distinct sign of local brain lesion; but such pain may yet be only disordered dura mater.

Andral seems to acknowledge—but with a little reluctance—that the whole course of common apoplexy may be unattended with pain. Abundant corroborative cases, however, are to be found in all writers on this point.

It is sufficiently apparent, in most diseases of the brain, that the attendant headache does not follow a similar course to the disease. The pain either precedes by weeks, or it supervenes or declines at any period of the course, and I cannot explain my view better, than by describing in the head what we daily see in progress under the skin—diffused disorder, including dura mater, leads to a central suppuration, and the surrounding action, together with the parietal pain, may subside or fluctuate until increasing deposition of pus, pressing in the most yielding direction, or extending on all sides, again invades sensitive tissues. We need not wonder that brain should suppurate before the meninges even cohere, or before they have permanently distended capillaries.

There is a common case which serves well to explain many particulars of the

cases in question. Disease of the internal ear, and headache, vary indefinitely. With increased cachexy the aggravations proceed, and death discovers an abscess an inch deep in the adjacent cerebrum or cerebellum. The dura mater seems nearly sound, the serous membrane may appear unaffected, and the surface of the brain healthy, or nearly so. Perhaps it is more forward to decompose. I do not hesitate, however, to conclude, that contiguous sympathy of capillaries explains the origin of the abscess. The peculiarities of the vessels of the head—of the diathesis determining first the painful state of vessels, and then the suppuration in one part rather than other affections in parts adjacent, are still to be borne in mind here.

A man, æt. 66, was three years losing his sight: he had occipital pain two months; only slight vision of one eye; dull anxious wandering; speech slow; three fits; coma.

A cartilaginous tumor was found against the corpora quadrigemina, cerebellum, and left hemisphere, with softening around; over the left choroid plexus there was ziss. of amber-coloured gelatinous effusion. (LOND. MED. GAZ. Sept. 1838; Haye's Jour. Feb. 1839.)

I would offer this case as an example of the kind of proof that is to be considered. Setting out with the physiological views of the several parts of the head, the reader will hardly examine a single case of head affection, without remarking some forcible illustration of the positions I have laid down.

We may continually see the worst forms of headache without affections of mind, of sense, or of motion, and without any trace of brain disorganization. This last occurs in every variety without headache.

Mental disturbances are attended with headache very much in proportion as the vascular disturbance is great in the meninges.

No other organic diseases in the head are so constantly accompanied by pain as those of the dura mater. None are so rarely painful as those of the central parts of the brain. The wider the disorder of the brain, the more varied are the signs, and the more frequently is there headache, and *vice versâ*. With limited brain disorganizations we may find the corresponding sensitive pairs affected; but it is much more usual to

observe the pain to be devoid of all correspondence, as to site, degree, and extent, except, perhaps, when a surface of the brain, or of the cerebellum, is greatly affected.

I cannot but conclude, that the more the observer is guided by these views, the more he will see cause to locate common headache superficially, and that even when pain chances to attend the most limited derangement at the centre of the brain.

36, Bedford Square.

AN ACCOUNT
OF
PROFESSOR MULDER'S
RESEARCHES ON THE CHEMICAL
PHYSIOLOGY OF RED COLOURING
MATTER OF BLOOD.

By DR. GOLDING BIRD,
Assistant-Physician to Guy's Hospital.
(For the Medical Gazette.)

THE appearance of Professor Mulder's "*Versuch einer allgemeinen physiologischen Chemie*," now in the course of publication, constitutes an important æra in the history of chemical physiology; the elaborate and successful researches of one of the most laborious and accurate physiological chemists of the age, being for the first time placed before the scientific world in an available form. Mulder having previously published his researches piecemeal, and generally in his native language (Dutch), which is scarcely understood by men of science out of Holland. It is to be hoped, that a translation by some one, both from chemical and medical attainment competent to the task, will before long appear, for the benefit of the English physiologist.

There is this very remarkable contrast between the works of Professor Liebig and Mulder; that whilst the former writer is characterised by the ingenuity and abundance of his hypotheses, the latter is content with a patient enumeration of facts, and so far as I have studied his work, scarcely advances a theory without fortifying himself with an accumulation of experimental data, for which he is chiefly indebted to his own labours in the Utrecht laboratory. It is this circumstance, indeed, which renders his work of such peculiar value to the physiologist.

In a former communication, I gave an account of Professor Mulder's researches on the chemistry of protein; the physiological relations of that substance having been since detailed by my friend Mr. Paget. I now purpose to give an account of the Professor's views regarding the nature of the red colouring matter of blood, a subject which has admitted of more discussion than perhaps any other in connection with physiological chemistry. The experimental researches of Mulder lead him to results differing *toto cælo* from the hypothesis of Liebig regarding the nature and functions of hæmatosine or red colouring matter.

Mulder sets out by observing that the functions of the red colouring matter must undoubtedly be an important one, inasmuch as it exists in such a large number of animals otherwise so distinct in their structure and habits, although at the same time it must be admitted that this substance is not absolutely essential to animal life, as it is wanting altogether in some tribes of animals. Regarding its origin, it must be assumed as being capable of being actually generated, *de novo*, in the organism, as it does not exist in the vegetable kingdom; consequently it cannot, like protein, be traced to the elements of food in the case of the herbivora. It is hence fair to presume, that if generated by the vegetable feeder, the carnivora must possess a similar power.

The colouring matter is normally enclosed in a sac or cell composed of a thin membrane, consisting chiefly of protein, and capable of admitting of percolation through its walls under certain circumstances, although it generally retains the coloured fluid it encloses sufficiently firmly to prevent its admixture with the serum. Within the sac is a nucleus of similar chemical composition to the membrane, and the whole thus organised constitutes the *blood-disk, globule, or red particle*.

It has been generally assumed, that hæmatosine exists in two distinct states in venous and arterial blood; the former containing, according to the received hypotheses, most carbon or carbonic acid, and the latter most oxygen. These distinctions are founded solely on differences in colour, and are unsupported by a single analysis. It was supposed, that in the lungs the red particles of

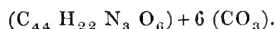
venous blood exhaled carbonic acid, and absorbed oxygen in altering their tint to that of arterial blood. It is now well known that analogous changes of colour are produced by merely immersing a piece of black venous clot in a saline solution, the vivid vermilion tint being assumed without any change in the proportion of oxygen.

A considerable proportion of colouring matter may be removed from a clot of blood by digestion in alcohol containing either sulphuric acid or ammonia.

The colouring matter of blood freed from other matters invariably presents the same constitution, viz. :—

44 atoms Carbon	=	264
22 ——— Hydrogen	=	22
3 ——— Nitrogen	=	42
6 ——— Oxygen	=	48
1 ——— Iron	=	28
		404

If a current of chlorine be transmitted through a solution of colouring matter of blood, the iron leaves the other elements, forming a chloride of iron, and the atom of metal thus removed is replaced by six of chlorous acid*, and the following compound is formed



During this process, the red colour of the hæmatosine is destroyed, and the new compound appears as a white flocculent precipitate. It must not, however, be assumed that the mere removal of the iron by the chlorine destroyed the colour, for that metal may be removed without materially affecting the red hue of the hæmatosine. For this purpose, let some dried coagulum of blood, (consisting chiefly of red particles, and protein compounds) be macerated in concentrated sulphuric acid; after some days, water may be added, and the remaining excess well washed on a filter. During the action of the acid on the clot, *hydrogen gas is evolved*, and the iron dissolves, forming a proto-sulphate, which passes through the filter. The coloured matter is left behind, preserving its original red hue,

* Mulder regards this acid (Chlorige-saure) as composed of CO_3 and not of CO_4 , as generally assumed. The former is the composition assigned to it by Count Stadion.

notwithstanding the removal of the iron, mixed with a combination of proto-tein, with sulphuric acid, in the following proportions :—

	C	H	N	O	
1 atom of iron-free hæmatosin	= 44	+ 22	+ 3	+ 6	
1 atom of protein	= 40	+ 31	+ 5	+ 12	+ 1 atom Sulphuric acid.
4 atoms of water		4		4	
<hr/>					
	84 + 57 + 8 + 22 + 1 atom SO ₃				

If, instead of digesting mere coagulum in the acid, pure red particles be substituted, the experiment is more satisfactory. For this purpose, allow blood as it escapes from a vein to fall into a solution of nitrate of potass. The coagulation of the fibrin is thus prevented, and a dense deposit of red particles falls to the bottom of the vessel; these, when well drained from adhering serum, and dried, may be mixed with strong sulphuric acid; *hydrogen gas is evolved just as when metallic iron is digested in the acid*, and after some days a solution of sulphate of iron is obtained, and the insoluble red colouring matter is thus left free from iron, but retaining its peculiar tint. The non-ferruginous hæmatosin consists of:

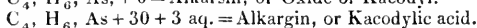
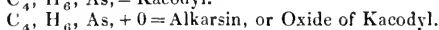
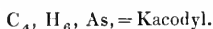


Having thus proved that the colour of red particles does not depend upon iron, Mulder next proceeds to combat the doctrine that these bodies are "carriers of oxygen," and that iron is oxidised during respiration, as assumed by Liebig: an assumption which forms the basis of that philosopher's theory of respiration.

It appears that iron is so intimately connected with the other elements of

hæmatosine, that it cannot be removed even by long digestion of red particles of blood in hydrochloric or dilute sulphuric acid. Consequently, even if no other explanation of the absorption of oxygen during respiration existed, these facts are sufficient to show the high impossibility of the iron being oxidised in the lungs, since it will not yield to hydrochloric acid. The converse has indeed been stated by Liebig, but his statement that weak acids remove iron from clots of blood, is explained by the fact that all the albuminous elements of blood contain a portion of this metal in a state which admits of ready solubility in acids.

If, as is assumed in Liebig's theory, sesqui-oxide of iron existed in arterial, and proto-carbonate of iron in venous blood, almost any dilute acid would be capable of dissolving out the oxide, which, as we have seen, is not the case. The fact of the iron really existing in the metallic state is moreover strongly supported by the evolution of hydrogen gas which occurs when sulphuric acid is digested on the clot, as pure red particles; this metal probably exists as an integrant component of hæmatosine, just as iodine does in sponge, sulphur in cystine, and arsenic in the curious kacodyl series of compounds; thus:—



Further, if iron existed as sesqui-oxide strong sulphuric acid, the residual iron-free matter ought to consist of—

$C_{44}, H_{22}, N_3, O_{4\frac{1}{2}}$, instead of C_{44}, H_{22}, N_3, O_6 , which is really left, for hæmatosine, = $C_{44}, H_{22}, N_3, O_6, Fe - Fe O_{1\frac{1}{2}} = C_{44}, H_{22}, N_3, O_{4\frac{1}{2}}$

—consequently the actual results of analysis are opposed to Liebig's theory.

From experiments of Scherer, it appears that when scarlet arterial ox-blood is beaten to separate fibrin, and diluted with thrice its volume of water, it assumes a venous hue, and a current of oxygen gas transmitted through it does not redden it. The mixture of a little oil, milk, chalk, or gypsum, with the black blood, instantly restored its

florid hue, so that the red colour is owing to other circumstances than the absorption of oxygen. Scherer indeed concluded that the arterial colour depended on white opaque particles diffused through the fluid.

It appears to have been observed by Hewson, that bright red blood-corpuscles are always bi-concave; these may therefore be supposed to reflect a great amount of light, and thus act like the

white reflecting particles of chalk, milk, &c., in Scherer's experiments. In dark-red blood, the corpuscles are convex, and the enveloping membrane much thinner than in bright-red blood, so that light passes easier through them, and they readily burst, allowing their contents to mix with serum when blood is largely diluted with water: the well-known effects of saline solutions in reddening blood is readily explained by their producing exosmosis, and consequently, a partial emptying of the sac of the blood-corpuscles, which then becoming doubly concave mirrors, reflect much light, and cause the fluid containing them to present an arterial tint. A current of carbonic acid gas will cause such blood to become again black, by altering the form of the reflecting corpuscles, causing them to become bi-convex.

Protein readily combines, as we have seen, with oxygen, and forms a soluble tritoxide and insoluble binoxide, both frequently being formed simultaneously in health, and abundantly so in inflammation, constituting the buffy coat of inflamed blood. In the process of healthy respiration these oxides are formed, and immediately tend to solidify, as we see in "buffy coat;" they fix round each blood-corpuscle, therefore; virtually making their investing membrane thicker and more opaque, better enabling it to reflect light, and producing the bright red colour of arterial blood. If we conceive such a layer of oxy-protein (buffy coat) to form round each blood-disc, and to go on contracting, it would produce a "cupped" state of two surfaces of the corpuscle (just as is seen on the upper surface of inflamed blood), and by converting them thus into double concave lenses, produce a condition more favourable for the powerful reflection of light, and necessarily heighten the light red colour of arterial blood. On reaching the capillaries, the coating of oxyprotein is removed, the protein being employed for the repair of tissue, and the oxygen used for effecting the metamorphosis of effete and exhausted structures. The corpuscles losing their opaque covering, have their power of reflecting light diminished, their concave surfaces are lost, and the whole assumes a venous tint.

When a piece of black venous clot

is exposed to the air, it becomes red, in consequence of absorption of oxygen, not by the colouring matter, but by the protein; and the opaque oxy-protein causes the mass to reflect a red light, just in the same manner that dark venous blood does when in a vessel of "milk-glass." A drop of an alkaline fluid destroys the red colour of the clot by dissolving the oxy-protein.

Digested in salt and water, a black clot becomes red by partly emptying the corpuscles by exosmosis, and by thickening their investing membrane. The subsequent washing with water removes the salt, fills the corpuscles by endosmosis, thus altering their figure, and diminishing their reflecting power, and causing the clot to look nearly black.

All dilute acids, even the carbonic, blacken blood by altering the figure of the corpuscles, and dissolving the reflecting layer of oxy-protein round them.

Scherer regards the conversion of black venous into red arterial blood to depend upon the loss of carbonic acid, the absorption of oxygen, and the presence of reflecting particles of the white opaque contents of the thoracic duct. Mulder believes the simple formation of the oxides of protein to be a sufficient explanation. He does not consider that when carbonic acid blackens blood it affects the red particles further than by physically altering their investing membrane by diminishing its reflecting power. He refers the very black colour of portal blood to such a state of the corpuscles, either from the action of carbonic acid, or more probably of a little free alkali (soda).

The real function of red corpuscles remains yet to be discovered; all evidence appears opposed to their playing any part of importance in the process of respiration. Mulder believes that they are generated from the normal constituents of the blood in the general circulation. Their destination is obscure: if they undergo a metamorphic change prior to their development into living tissue, the products of their decomposition may be probably traced to the *bilifuscin* of the bile. (In all probability, the red particles act physiologically, as has been suggested, in constituting the elements of many living tissues, playing the part of

nucleated cells, as, indeed, is now pretty generally admitted.)

The following is a brief summary of the above views of Mulder:—

1. The red particles of blood contain iron as a simple element, combined with nitrogen, carbon, hydrogen, and oxygen, and are chemically identical in venous and arterial blood.

2. In traversing the capillary system of the lungs, the protein of the blood combines with oxygen, generating a compound analogous to "buffy coat," which forms a contractile covering to the blood corpuscles; causing them to become more opaque, and giving them the figure of doubly concave lenses.

3. In the general capillary circulation, the oxy-protein surrounding the corpuscles is decomposed, the oxygen being used for dissolving old tissue, and the protein deposited to supply its place. The corpuscles lose their reflecting concave figure, and become more transparent by this change.

4. The difference of colour between venous and arterial blood depends solely upon a physical difference in the surfaces of the corpuscles; being semi-opaque concave mirrors in the latter, and mere transparent convex bodies in the former.

5. Whatever alters the figure of the corpuscles, or gives blood the power of more powerfully reflecting light, at once alters its tint.

6. During respiration, the colouring matter of the blood undergoes no change, and indeed plays no part, either as a whole, or in regard to the iron which exists as an element in it.

7. Iron is not essential to the red colour of blood corpuscles, although its presence is probably necessary for their formation and development.

made within the last few years than in our knowledge of urinary diseases, and of the connection between the actions of the kidneys and the functions of the digestive organs and skin; and the information derivable from an examination of the urine under different states of disease is so important as a guide to therapeutic treatment, that no one can be considered competent to practise his profession who neglects to avail himself of the indications which this excretion affords. It is impossible for any one to estimate more highly than ourselves the researches of our countryman, Dr. Prout, in this department of medical science; and the fact that his work on *Stomach and Urinary Diseases* has reached a fourth edition is a sufficient proof of the value and utility of his labours. There are, however, few medical works more difficult of "digestion" than Dr. Prout's *Treatise*; and we believe that its study will be greatly facilitated by the excellent shorter and more rudimentary work by Dr. Bird, which we now introduce to our readers. We can fully bear out the words of the author of the work which heads this notice, when he states that "in mixing with medical men in practice, I have often found them in want of some work which would enable them readily to discover the nature of a deposit in the urine, and succinctly point out its pathological and therapeutical indications. To be available, it was necessary that such a work should not exceed the size of a small manual, and its contents be so arranged as to admit of ready reference, and thus be more fitted to act in the humble office of pioneer to more elaborate, and more diffused sources of information."

Our readers will recollect that in the early part of last year a short course of lectures on the diagnosis and pathology of urinary sediments by Dr. G. Bird was reported in this journal. These lectures were afterwards translated into German, and collated into a volume, which was published at Vienna. The perusal of this induced the author much to extend, indeed nearly to rewrite, the whole subject, and he has now ventured to place this work before his professional brethren as the result of many years' close observation in the field of public experience which he has fortunately had at his command.

ANALYSES AND NOTICES OF BOOKS.

"L'auteur se tue à allonger ce que le lecteur se tue à abrégé."—D'ALEMBERT.

Urinary Deposits, their Diagnosis, Pathology, and Therapeutical Indications. By GOLDING BIRD, A.M. M.D. Assistant Physician to, and Lecturer on Materia Medica at, Guy's Hospital, &c. Churchill: 1844.

THERE is no department of pathology in which greater progress has been

This task Dr. Bird has ably performed, and he has produced a work which will be found of great utility to students, and to medical practitioners desirous of becoming practically acquainted with urinary pathology at a small expense of time and study. The directions given for the detection of urinary sediments are clear and accurate, and easily followed by persons but imperfectly acquainted with chemistry. The author has also pointed out the facility afforded by the microscope in the examination of these deposits, and has given some accurate representations of them, by the aid of which the observer may in a few minutes learn the nature of any variety of sediment. His observations on the pathology of urinary deposits evince much talent and study of this difficult subject, and the remarks on their treatment, though brief, are judicious and practical.

Perhaps the most interesting chapter in this volume, because containing the most novelty, is the one on the chemical pathology of oxalate of lime (oxaluria). Crystals (octohedral) of this deposit have, until recently, been regarded as of very rare occurrence, and we are chiefly indebted to the researches of Dr. Bird for showing the error of this opinion, and that this salt, when present, is easily overlooked. He is inclined to believe that the formation of oxalate of lime is connected with the depressing influences always more or less active in large and densely populated cities; and he declares, as the result of his experience, that in the cases of disease occurring in this metropolis, *the oxalate is of far more frequent occurrence in urine than the deposits of earthy phosphates*. We regret that we have not space for the directions which are given for the detection of this deposit, but must refer our readers to the work itself. Our author speaks highly of the influence of colchicum in causing the disappearance of this salt; and it may be interesting to state that Dr. Bence Jones* has shown that it is frequently present in cases of rheumatism; confirming the fact of the close connection between the uric acid deposit and octohedral crystals.

* See the new volume of the Medico-Chirurgical Transactions.

MEDICAL GAZETTE.

Friday, December 27, 1844.

"Licet omnibus, licet etiam mihi, dignitatem Artis Medicæ tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

THE DUTIES OF THE STATE IN REFERENCE TO THE PRAC- TITIONER OF MEDICINE.

THE more we think on the plan of dealing with the medical profession which was thrown out in broad outline in our last week's number, the more we are disposed to regard it as the best and most feasible for all parties;—for the public first; for the medical profession next, and for the minister who proposes to legislate for that profession in fine. Did we want farther confirmation of the justice of this conclusion, we should find it in several excellent letters that have been addressed to us on the subject, and from the remarks which we have heard incidentally made upon the general scheme by more than one of the best heads in the profession.

The progress of things in all policed countries does in fact appear to be from private enterprise or speculation to more public means of carrying out specific ends: An individual trader opens up some vein of commerce; it is obviously rich; he tries it for a time by himself, but soon discovers it too extensive to be worked to the best advantage by the limited power of his own capital and resources; he associates another with him, and to the original firm is added an "and Co.;" the matter is still found beyond the strength of the original projector, and his friend Co., upon which a larger trading company is formed, managed by a Board, and having numerous shareholders among the capitalists of the kingdom. This Company prospers; it not only carries on a vast and lucrative commerce, but it acquires settle-

ments in the countries beyond seas with which it trafficks; these settlements extend; the occupants upon sufferance at first of a few square feet of land for the purpose of storing their merchandise, find themselves in the end independent sovereigns of a vast continent, with a standing army of 150,000 men under their command, and more than a 100,000,000 of subjects doing them homage. The government of the native country of these bold merchants confirms them in their enterprises for a long succession of years; it grants them one charter of incorporation and exclusive privilege after another, and at length enables them to outgrow the need of all protection; each exclusive privilege, each monopoly, is, in fact, discovered by and by, to be prejudicial to the general interests, and after due notice given, the State resumes its most essential grants, throws open the trade to its subjects at large, and itself assumes the virtual sovereignty in the territories won by these merchant princes.

It is not, and cannot be otherwise with associations for the promotion of matters of science, or of art, especially when these touch, as medicine does in each and all of its departments, upon police. Royal Societies, and Royal Academies, indeed, are private associations, with the state seal of approbation upon them; and so they may remain; the state is not required to interfere peculiarly in their management and proceedings; the matters they occupy themselves withal do not bear upon the common weal. It is otherwise with medicine; every day shows more and more clearly that the enlightened physician is to become the future guide of the statesman in the vast efforts he has yet to make to improve the physical condition of those over whom Providence has set him in authority, and so to raise them in the scale of moral excellence.

The wants of society, for instance, lead the general dealer, the *grocer* of the country, to add a stock of drugs or medicinal substances to his other wares,—to his spices and liquors, his oils and honeys, pickles and condiments, and confections. The traffic in drugs extends; the department has particular attractions for a certain order of minds, and as knowledge enlarges, the owners of these minds cast off the grocery business; from simple dealers in medicines they inform themselves of their virtues, and of the circumstances in which they are said to prove useful; they are soon consulted on diseases at home, and then they begin to go abroad in the more serious cases—the grocer has, in fact, merged in the physician, and the apothecary of the last century: the prototype of the general practitioner of the present day is the result.

Other men, of more liberal education and fortune, scholars, often priests, who had never engaged in trade, but who have nevertheless an innate taste for the natural science of medicine, give themselves up to this art and mystery; and thus is the medical man of learning, the prototype of the present physician, produced—the apothecary in everything, save that he does not deal in the medicines whose virtues he studies and prescribes.

But neither the apothecary nor the physician wholly meet the wants of society in reference to medical attendance. There are certain operations of surgery;—blood-letting, tooth-extracting, and, in cases of accident or emergency, even amputation, that must be undertaken. Neither the apothecary nor the physician hold these within their province, and another functionary must be found. From his practice with edge-tools upon the excrementitious portions of the body, the beard and the hair, the barber appears at an early age to have been

thought the fittest person in the commonwealth to venture beyond the surface; from drawing blood accidentally, it was probably deemed logical to conclude that he was also the proper man to draw it on purpose; and so the barber-surgeon, the original of the present member of the Royal College of Surgeons, rose into being.

But the measure was not yet full: to say nothing of the increase in the number of articles of the *materia medica* brought about by the lapse of time and the extension of natural history, chemistry has arisen to create hundreds of new and most energetic compounds that powerfully influence the body in a state of health and disease. These articles, these compounds, were found subject enough to engage one man's attention, and it was seen that the preparer and compounder of medicines might be advantageously separated from the practitioner of physic. Hence has been produced the modern chemist and druggist—the indispensable adjunct of the physician and surgeon, of the true professional man, in the exercise of his calling.

Like draws to like; men with a community of purpose and of interest, pursuing the same path in life, soon herd together, first in smaller and then in larger numbers; and the apothecary, the physician, the surgeon, and the chemist, having each been seen useful members of the state, find favour in the eyes of successive sovereigns, who associate them into Companies or Colleges, and from time to time grant them charters, conferring peculiar privileges and immunities, rather, however, with a view to their protection severally against interlopers, than with an eye to the public health and safety. These associations by and by begin testing by examination or otherwise the worthiness of those who seek admission into their body; they next make certain requirements as to education,

preliminary and professional, before they will consent to receive candidates for acceptance; and they at the same time begin to grant diplomas or certificates, as assurances to the public of competency in a certain determinate walk on the part of the holder. These private associations finally acquire such a standing in the general esteem, that Government sees fit to require of aspirants to medical offices in the public service, that they should have successfully undergone the examination, and obtained the diploma, of one or other of them, before it will hold them eligible for an appointment. Government, however, has never forgone its title to be satisfied of the actual worthiness of the possessors of these diplomas by boards of its own choosing, and has by this means—by its Army and Navy Medical Boards—acted as a most salutary check upon the licensing bodies. Hitherto, nevertheless, Government has obviously worked by means of associations or corporations to a greater or less degree private,—apart from, and not dependent on itself, at all events. Our own opinion is, that this state of things should cease; that precisely as in the case of the East Indies, and our other colonial possessions, the time has come when the interests of all parties make it imperative on the Government of this country to take the business of licensing the medical practitioner generally, for the community as well as for the army and navy, into its own hands.

The several institutions connected with medicine, have done good service so far; the discontent that has been waxing in the medical profession for years, and the open discord that has but just broken out between the chartered institutions and the great body of the profession, must satisfy all unprejudiced persons that, in their present shape, these Institutions have outlived their destinies; that they are no longer fitted to meet the wants of the times, that in

some instances they are even challenged with having interests opposed to the general good, and that they ought now to be exonerated from the business of examining into the competency of individuals to undertake the responsible duties of medical practitioners.

When we look dispassionately at the storm of discord and difference in which we are at this moment involved, we see it entirely owing to the clashing of one interest, or of one presumed interest, in the profession—of one Royal College or corporation, of one class or grade of the profession against another; the Royal College of Surgeons of Dublin against the Royal College of Surgeons in London and its members, especially those among them who are settled in Ireland, and whom the Irish College is directly interested in reducing to an inferior grade*; the Royal Colleges of Surgeons generally, and the Universities, that of Edinburgh in especial, against the Apothecaries' Company; finally, and most disastrous of all in its immediate and social effects, of one grade or department of the profession against another—physician and pure or operating surgeon against general practitioner, general practitioner against physician and hospital surgeon.

All this should end, and it can only end satisfactorily in one way; by reducing the chartered colleges and corporations to a footing of equality in reference to the grand bone of contention among them, the power of conferring licenses to practise medicine in any of its branches as a means of making money. These institutions, if reduced to their pristine state of pri-

vacy, have the elements of great good inherent in them; they may again become, what they have long ceased to be, means for the advancement of the art and science of medicine. And in returning to the "post of honour," which for scientific bodies never can be other than "the private station," they will in fact lose nothing: the Royal College of Physicians have long ceased to exercise their right of insisting on every gentleman who settles in "London or within seven miles of the same," joining them; yet no one thinks it less incumbent on him now than formerly, to present himself for reception in Pall-Mall when he brings his Doctor's diploma into play in London. The Royal College of Surgeons never had any right to require members to join them; yet have they for years been deriving an income of ten or twelve thousand per annum. from the voluntary afflux of parties who held it their interest to obtain their diploma. In the same way with reference to the Universities, alike of England, Scotland, and Ireland: there has yet been nothing necessary or compulsory about the degrees they have granted; these have always been optional, yet not the less eagerly have they been sought after, and prized on that account. As to Apothecaries' Company, this is the only institution that would be unequally dealt with in our scheme of relieving all the institutions connected with the profession of medicine from the burthen of licensing the practitioner; but it seems by common consent agreed that the association of a liberal profession with an offshoot of the old Grocers' Company, was a most unlucky conjunction, and that as it ought never to have taken place, so ought it now to come to an end. The members of this company themselves give up the point; they are ready to ally themselves with the general practitioners who are now struggling for a

* We have already explained this matter. This Irish Royal College held themselves literally robbed of a large sum every year for some quarter of a century or so by the English Royal College; the Irish charter of incorporation being so framed as to prevent the young men educated in Dublin from obtaining their diplomas there, but forcing them to London for their certificates.

charter of incorporation, and to quit their old name and designation.

Our scheme of medical reform, then may be briefly set down under the following heads:—

1. A Supreme Council of Health and Education, chosen by the Home Minister.

2. Boards of Examiners chosen by the Council, one for each division of the kingdom, and holding its sittings in London, Dublin, and Edinburgh, respectively, to pass which, should be imperative on every one who aspired to the responsible duty of practising medicine in any of its branches or departments.

3. Existing Institutions, and Institutions which the circumstances of the times have made necessary.

a. The UNIVERSITIES, which should have the privilege, as heretofore, of conferring honorary titles or degrees, but which should not have any power of granting a license to practise medicine in any of its branches, independently of the Government board.

b. The ROYAL COLLEGES OF PHYSICIANS, which should be private associations for the furtherance of the science and art of medicine.

c. The ROYAL COLLEGES OF SURGEONS, which should be private associations for the promotion of the science and art of surgery.

d. A ROYAL COLLEGE OF GENERAL PRACTITIONERS. — An Institution with this title, is only made necessary by circumstances. It might by and by become a *Royal College of Obstetricians*. At present, however, it appears altogether indispensable. The general practitioner of the present day, is a man of too much importance to be left uncared for. He is, as an excellent writer* has well said, "The ordinary attendant of the great bulk of the population, and

now only summons the physician to his aid in cases of difficulty and danger. The expectant mother in pregnancy is under his direction; he conducts her through the often critical period of parturition, and her off-spring from the moment of birth is his accustomed charge. Can a medical man have more important or more responsible duties confided to him? And is it not the duty of the legislature to take care that no man shall be licensed to undertake these duties without having adduced proofs of being qualified to perform them? These are questions which admit of being answered in one way only. *Upon the skill and judgment of the General Practitioner depend mainly the health of the community.*"

e. A ROYAL COLLEGE OF CHEMISTS AND PHARMACISTS,—an institution that has become quite imperative, and without which no scheme of Medical Reform can be held even tolerably complete, though it appears very generally to have been entirely overlooked.

Whether these institutions ought to be represented in their corporate capacity in the Council of Health and Education, or not, we are still undetermined. We see certain objections to their being so represented, and also certain objections to their being left out of the reckoning. Probably, on the whole, they would be better left unrepresented; the medical men who had seats in the Council of Health and Education would almost, as matter of course, be associates of one or other of these institutions, so that they would still be represented indirectly. Were one represented, we would have all upon the same footing.

But we would not enter into particular details now; we shall probably find an opportunity of doing so at another time.

* * Sir James Clark, "Second Letter on Medical Reform," pp. 8 and 9.

ST. MARYLEBONE PARISH INFIRMARY.

A CORRESPONDENT writes as follows: "The Board of Guardians have determined on not filling up the vacant honorary surgeoncy to this institution. A very active canvass had been going on, however, in favour of several candidates for the appointment; but, from what you say some fortnight back of the offer of advice gratis by the young aspirant for employment at Hastings, I believe you will be pleased to learn that the offers of gratuitous services to the wealthy parish of St. Marylebone have been definitively declined. And surely, sir, when it is considered that the parish paupers are entitled by law, by right, and not as a matter of mere voluntary charity, to good and proper medical attendance; and that the parish which is bound to provide this aid is, in this instance, notoriously very rich; it can neither be just nor benevolent to expect of our poor profession to *give* services which, on every principle of justice, ought to be *paid* for, as well as those of the clergyman or lawyer under similar circumstances. More than this, I think you will agree with me in viewing the decision of the Guardians as a wise one. It is certain, in a general way, that the best services are to be had for payment: in short, that the best interests of the poor, of their legal guardians, and of our own profession, have been had in view when the Guardians came to the determination just mentioned.

THE GRAND OBSTACLE TO THE SUPPRESSION OF QUACKERY.

WE have another opportunity this week of referring to a Provincial newspaper—a conservative journal, we apprehend—and extracting the following list, to put those among our readers who are sanguine enough to hope that they may outlive authorized quackery out of their vain imagining:—1st. "Mr. Thomas's Succedaneum for filling decayed teeth," and "Method of fixing artificial teeth," which last we are informed "has obtained the approbation and recommendation" of Sir James Clark, Bart., Dr. Locock, Dr. Ferguson, Dr. Bright, Sir B. Brodie, Bart." &c. &c. We have been desired by one at least of the distinguished men thus im-

pudently paraded, to say that there is not one word of truth in the statement; that he has never either approved or recommended Mr. Thomas's method of fixing artificial teeth, and that his name is used without all authority. 2nd. A new and important edition of the "Silent Friend in Human Frailty;" followed by the "Cordial Balm of Syriacum" and the "Purifying Specific Pills." 3rd. "Dr. Grandison's Charity Pills." 4th. "New wonders every day!—a cure for all! Holloway's Ointment and Pills." 5th. "Worsdell's Pills, by John Kaye." 6th. "Rowland's preparations for the hair, the skin, and the teeth." 7th. "Parr's Life Pills." 8th. "Wilkinson and Co. Consulting Surgeons, their Purifying Drops and Secret Medical Adviser." 9th. "Unparalleled Success! Wray's Balsamic Pills." 10th. The 21st Thousand, "Manhood," &c.

This last is not very long; nevertheless it fills, along with two PUFFS, one dedicated to Holloway's Salve, t'other to Thomas's Teeth, upwards of four columns of the newspaper whence it is extracted, and as the payment is according to the length, the value of the advertising practitioners and vendors of specific medicines to the proprietors, may be imagined.

ROYAL COLLEGE OF SURGEONS, OF EDINBURGH.

WE have a letter from the Secretary of the Royal College of Surgeons of Edinburgh, authorising us to contradict the rumour that any proposition had been made for the sale of the museum of that old and excellent institution. It had only been "the greater pity" had any such proposition been absolutely made. Some wicked members of a rival diploma shop probably spread the report. We trust, with new arrangements, that the Royal College of Surgeons of Edinburgh will soon find itself in a condition to extend its museum.

THE SANATORIUM.

WE have a letter from Dr. Hitchman, the resident medical officer of the Sanatorium, informing us that mesmerism is neither believed in, nor practised, by any of the medical gentlemen officially attached to that useful Institution. He seems to think that our notice of the

case of removal of the mammalately performed there, might lead to a contrary presumption. We do not see the matter in this light; but, lest any mistake should occur, we hasten to mention Dr. Hitchman's disclaimer.

MISS MARTINEAU AND MESMERISM.

To the Editor of the Medical Gazette.

SIR,

ALTHOUGH it may be proper that judgment should be suspended regarding the case of Miss Martineau, it is by no means necessary that her letters on mesmerism should be allowed to pass without comment, more especially as she and her mesmerist have nightly parties for the purpose of witnessing their performances, and spare no pains to make proselytes; and such as remain sceptics, or attempt to investigate the subject, are assailed in no very measured terms, as is evidenced by the allusion to Dr. Forbes's exposure of Alexis, and also her very uncourteous, not to say coarse attack, upon the gentleman whom she accuses of singing J.'s arm, and calling fire! It was on this same occasion that it is stated that J. saw the vision of a shipwreck, her cousin being on board the vessel that was lost; but though Miss Martineau pleads ignorance of the fact, the account of the wreck was well known in the village long before the hour at which this girl was mesmerised, and it is equally well known that she had been out in the village, and could not fail to hear the news: it would be satisfactory to learn also whether Miss Martineau herself was not already acquainted with all the particulars.

It is not my intention to go through Miss Martineau's letters, but principally to mention one fact, which will at once stamp the value that should be set upon these communications; Miss M. herself appears to be imposed upon, and is unconsciously lending herself to impose upon others; her judgment is perverted, her mental faculties obscured, and she views everything through a false medium; her mesmerist has worked upon her naturally excitable imagination, and induced her to receive as truths, things and statements, which a more cool observer would at once detect as fallacies; for example, that the somnambule cannot hear a conversation that is carried on in her presence, unless the speaker is brought into mesmeric communication with her. When this fact is known, it will no longer appear extraordinary, that the answers of the somnambule should be in exact accordance with the wishes and expectations of the mesmerist; and if their neophyte was as pure and

unsophisticated as Miss M. believes at the commencement, she could not by possibility be placed in circumstances better calculated to teach her dissimulation and hypocrisy; and it is not extraordinary that Miss Martineau should believe that the mind of the somnambule should mirror that of the mesmerist, when the questions to be proposed, and the answers expected, are openly canvassed in the presence of the somnambule.

What I have now said will be sufficient to shew the fallacy of Miss M.'s conclusions, based as they are upon so worthless a foundation.

There is much, very much, in Miss Martineau's letters, which is wholly unintelligible a mere farrago of words, conveying no meaning, and which to weak minds may serve to invest the subject in mystery, but which in reality only betrays the emptiness of the source from whence it sprung.

There is much more in these letters to find serious fault with; they are calculated to undermine the principles of the christian faith, and it has become high time that all well-thinking and well-principled people should set their faces against a pretended science, which is capable of being thus perverted.

I should not probably have troubled you and the medical profession with this letter, had it not been for the continued attempts which are made to unite mesmerism with the science of medicine; it becomes therefore the duty of every one interested in preserving the healing art from so debasing an alliance, to make known whatever comes to their knowledge, which exposes the fraud and deceit of the mesmerists.

I remain, sir,

Your obedient servant,

VERITAS.

To the Editor of the Medical Gazette.

SIR,

I APPROVE highly of your excluding from the Gazette, mesmeric wonders and controversies: "Pencilings," and articles on animal magnetism, greatly disfigure the pages of a contemporary journal.

Your correspondent, Mr. Chatto, must be credulous indeed, if he supposes the public, or the votaries of mesmerism, would be satisfied that an inquiry had been "patient, deliberate, and candid," were a committee of hospital surgeons to pronounce that *science* (?) as a means of preventing pain during operations, a *useless pawing and mummery*.

Mr. Chatto must not conclude that because hospital surgeons are not always before the public endeavouring to refute the wild and visionary statements of mesmerists, homœopathsists, and hydropathsists, that they have nevertheless failed to test the truth and

correctness of what these professors assert ; such a trial has long since been forced upon many of them by the reckless daring which has characterised the numerous statements which have from time to time been published. Instances of surprising insensibility to pain, or *power of concealing it*, are common enough ; only on Sunday evening last, I had to amputate the fore-arm, (an operation much simplified, as are other amputations, by the flap incisions, as recommended by Mr. Liston) for a gun-shot injury, which had destroyed the hand and wrist, perished one eye, and closed the other. I bethought me at the time how hypnotism, or mesmerism, would have been applicable to the case ; however, no such *aid* (?) was needed ; the man bore the operations without even a moan at "the crunching of the bone." I could name three other instances out of seven capital operations which I have been called upon to perform in hospital and private practice during the last seven or eight weeks, where the operations were endured with the greatest fortitude, and without a murmur ; and in traumatic amputations, I have frequently observed the same tolerance, or freedom from pain. The fact is notorious—mesmeric exhibitions are only suited, as Dr. Dickson says, to "dyspeptic men, and hysteric women," nervous personages, whom a straw or feather may move, and who swoon, or what not, at even the thought of blood being shed ; and of this Mr. Chatto can be satisfied by attending the operations at the metropolitan hospitals, if he be not in the habit of operating himself. Sir B. Brodie's "Nervous Affections." Mr. Travers' "Inquiry on Constitutional Irritation," and Dr. Gavin's work on "Feigned and Factitious Diseases," abound in nervous and other freaks of every description. A brief account of the cases of M. Cloquet, Mr. Alcock, Dr. Oliver, and of Sir B. Brodie, may be read in the Medical Gazette, of Dec. 1842, and other journals.

Hospital physicians and surgeons generally, do not, I believe, call into question "the effects of mental attention upon bodily organs," or deny that there may be instances of "surprising insensibility to external impressions, while the imagination may be in activity ;" but they refuse, and I think properly, to notice the mesmero-phrenomagnetic absurdities which too frequently are paraded before the public for no other object than notoriety and private gain. I should expect as much benefit to arise from a committee of inquiry, composed of hospital surgeons, as suggested by Mr. Chatto, as some time since resulted from one formed in this town, of members of the law, physic, and divinity, with a sprinkling of "young Lynn," for the purpose of examining into the merits of mesmerism and phrenology,

and which was presided over by a patient of the Rev. Dr. Moseley.

You are at liberty to insert or reject this hasty letter ; I am prepared for the thunderings of the maudlin sentimentalists. The public ought not to be deluded by the wholesale charges of prejudice, indifference, and inhumanity, too frequently alleged against the medical profession of the present day.

I remain, sir,

Your obedient servant,

CHARLES COTTON.

Lynn, Dec. 18, 1844.

ON THE APPLICATION OF MESMERISM TO SURGICAL OPERATIONS.

To the Editor of the Medical Gazette.

SIR,

IN your number for Dec. 13th is a letter, signed "John Chatto," suggesting that "a committee of hospital surgeons be appointed for the important investigation of the claims of mesmerism to the power of rendering persons insensible to pain during the performance of surgical operations," and accusing the hospital surgeons of "unyielding scepticism," because "he has not heard that even one has employed the facilities which the charity with which he is connected may afford "for this purpose ;" even the medical corporations are impugned because "the hospital surgeons have, to use the mildest terms, shown a culpable apathy, and a want of a due recognition of the responsibility of their position in the profession."

It may be, sir, that the surgeons in question have a trifling regard to their own characters, and the reputation of their hospitals, and that the governors of these institutions may be actuated by the same spirit as those of the North London Hospital, and quietly recommend the resignation of any officer who delegated their functions to the votaries of this new-old theory. As, however, what is good for the cat may be good for the kitten, I beg to suggest that Mr. Chatto should shame these negligent people into action by forming a committee of six medical friends, with himself as their director or secretary, to perform the following experiments :—

1st. The committee may be formed by selecting such friends as may happen, for the convenience of the experiment, to possess a tooth of which they desire to be rid : let an accurate note be taken of the degree of sensibility in each individual before the operation, and let Mr. Nasmyth be requested (and his love of science would doubtless lead him to consent) to be present at the extraction of the offending molars by any

operator whom the committee may select, in order that he may mark accurately the degree of contraction of the muscles of the face, or the elevation of the voice, or the pressure of the hands on the chair, indicating the pain felt by each member in succession; this degree being represented in numbers, which may be compared with the intensity of the mesmeric influence in each before the operation; and to prevent any chance of deception, the mesmeriser should make memoranda as to this or any other point of importance in the experiment before the trial begins, and deposit his notes, sealed up, in the hands of the secretary.

2d. Let each member of the committee be armed with an acupuncture needle, exactly one inch long and of moderate thickness, and let each in succession pass the needle into any specified part of the body of the other five members, the part to be punctured being selected by lot out of a certain number previously agreed upon in committee, so that no one may know where exactly to expect the puncture. To avoid danger to the members of the committee, no important organ is to be selected, and as there may be some confusion between material and moral sensibility, the committee may exclude the part marked out by the course of the gluteus maximus muscle. This experiment may be varied thus: first, each member may be mesmerised separately in a complete manner, and the other five may introduce their needles, one after the other, at intervals varying from thirty to ninety seconds between the successive trials; and secondly, all five may simultaneously employ their implements in different parts of the same person. In this way intensity of pain and duration of pain may be each represented, and a pleasing variety of experiments will be introduced, by which every source of deception or error is avoided, and the most sceptical hospital surgeon will not fail to be convinced. I say nothing, sir, of the satisfaction and conviction of the public, because the public is convinced very often at uncertain periods; only it unfortunately happens that they forget again what they have so often been informed of on the most indubitable testimony, from Mesmer himself down to Miss Martineau.

For my own part, sir, if Mr. Chatto and his six friends in committee will vouch for the success of these experiments, due details of the experiments being given, I have no doubt I can form a committee of hospital surgeons to try the efficacy of mesmerism on the *cat*, that is to say, in the greater operations of amputation or excision of the heart.—I am, sir,

Your most obedient servant,

ONE OF THE HOSPITAL SURGEONS.

Dec. 27th, 1844.

INCORPORATION OF GENERAL PRACTITIONERS.

To the Editor of the Medical Gazette.

SIR,

IN the number of the Provincial Medical Journal for November 27th, there is a letter from Mr. Martin, of Reigate, in which that gentleman notices in favourable terms a letter I addressed to you a few weeks since (see MED. GAZ. Nov. 15th), in which I advocated the incorporation of the general practitioners. To that letter I beg leave to make a few observations in reply. In the first place, I may remark that I see nothing in the present aspect of medical affairs to lead me to suppose that any other course than the incorporation of the general practitioners can be safely advocated as an expedient measure. Did the Colleges of Physicians and Surgeons, even at this late period, show any sincere desire to admit, on an honourable and liberal footing, the general practitioners into their respective corporations as licentiates in medicine in the College of Physicians, and as licentiates in surgery (where they are not already members) in the College of Surgeons—thus creating two distinct classes in each College, fellows and licentiates; the former including all consultant and pure physicians and surgeons, and the latter including all general practitioners—I, for one, believe that the interest of the profession, as a whole, would be best met by the body of general practitioners consenting to such an arrangement. In this case the examination of the general practitioner in medicine would properly, I conceive, devolve on a mixed board, consisting of four or six physicians and as many general practitioners, the president being a surgeon. It is, however, but too probable that more exclusive views will prevail in the Colleges, and that we shall be spared the necessity of canvassing the details of any such scheme as this.

I may proceed, therefore, to consider what the plan of examination should be in case of the general practitioner being incorporated into a Society or College. I am quite disposed to admit, that when incorporated, the general practitioner should be placed in an independent position as regards the examination of candidate for the license; and that care must be taken to guard against the introduction of a “body of men,” to use Mr. Martin’s words, “less skilled and less informed than the present race of Licentiates.” Cooperation and union, however, do not necessarily imply, and indeed, may be far from implying, dependence; and I must still confess, that I should wish to see the medical part of the examination conducted by a mixed board of physicians and general

practitioners) the latter being the same individuals who assist in the medical examination,) in equal numbers, presided over by the same general practitioner, who should have the casting vote. I know that it will be urged, that there are general practitioners who, without any aid from the Colleges, are fully competent to form an examining board, both in medicine and surgery. This I am quite ready to admit, as regards medicine, to the full,—though as regards surgery, in the present condition of general practice in London, I feel a greater doubt. But if we even admit this competency to the full, I believe that the license would be much more highly valued by the candidates for it, and would be really more valuable, when attested by such signatures as those of a Watson, a Copland, a Williams, or a Forbes, in medicine; or by those of a Brodie, a Guthrie, a Cooper, or a Travers in surgery, in addition to those of learned and skilful general practitioners, than it would be if attested by general practitioners alone, however experienced, and however able. As regards surgery. I incline to believe that such a course would be essential, in order to insure a sufficient guarantee of the qualification of the candidate in this department of practice. The examiners from the Colleges would be conferring and receiving honour by such an arrangement, which would thus be alike honourable to both parties. In such a sketch as this it would be premature perhaps to attempt to fill up the details as regards the method of election, &c. which will readily suggest themselves to the reader.

There is another part of Mr. Martin's letter, in regard to which I beg to make a few remarks. Mr. Martin contends that the Court of Assistants and the Court of Examiners are distinct, and do not derive their power from the trading part of the Society of Apothecaries; and, further, that these Courts are virtual representatives of general practitioners. The Court of Examiners, I am aware, is thus distinct; but I am greatly mistaken indeed, if the Court of Assistants, by whom the Examiners are appointed, be not the ruling body of the trading company. The general practitioners of this country have received, indeed, their license to practise from the Court of Examiners, but I do not see how that constitutes the said Court the virtual representatives. They are not admitted to any participation in the government or privileges of the Society, or of the Court of Examiners; they have merely conferred on them the right to practise; and I would maintain that the general practitioners—the *great third estate of the profession in England*—are thus without either actual or virtual representatives in the medical poeity of this country. The member of the College of Surgeons has some ties,

slight and defective though they be, with the College, in the lectures, the library, and the magnificent museum of that corporation; but I am much mistaken if the licentiate of the Apothecaries' Company, after he has once received his license, ever finds his way back to the Hall in Blackfriars, unless in the capacity of a purchaser of drugs. The Court of Examiners have, however, performed their task well, and should certainly contribute a considerable quota of their number to the new examining board: indeed, in case of any charter of incorporation being granted to the general practitioners, it would only be a proper compliment to these gentlemen that such charter should be made out in their names, coupled with those of a sufficient number of the leading general practitioners, both of the metropolitan provinces of England and Wales.

It is to be hoped that, in this juncture, the general practitioners of England, will display that energy and firmness, coupled with moderation, which are calculated to secure to them that place in the medical body politic which I think they have a right to seek; and which the real interests of our profession as a whole appear to me also to demand.

I may be allowed, in conclusion, to observe, that the great danger, at the present moment, appears to me to be that of one grade of the profession seeking its own interests irrespective of those of the profession as a whole, and endeavouring to elevate itself at the expense of some other grade, whether that grade be above or below it. Let us hope that class interests will cease to be our sole principle of action, and that in this great struggle, and golden opportunity for a healthy organization of our profession, Ephraim, so to speak, will no more envy Judah, nor Judah vex Ephraim. I again take the liberty to subscribe myself simply,

MEDICUS.

IRREGULAR PRACTITIONERS.

To the Editor of the Medical Gazette.

SIR,

EVERY day brings under our notice some fresh instance of loss of life, or at least of permanent injury to health, from the practice of irregular or unlicensed persons. I was much struck on perusing a letter from Mr. W. Thompson, of Bognor, in this week's GAZETTE, detailing a case of intra-uterine hæmorrhage, where, I believe, had the patient been under the care of a medical man, instead of an ignorant midwife, her life would have been preserved.

In Dr. Ingleby's admirable work on Uterine Hæmorrhage, (I regret to say that the work is out of print, and I therefore quote

from memory), a case is narrated identical with that which Mr. Thomson has now brought under the notice of the profession. The intelligent medical practitioner who was in attendance immediately detected the cause of the alarming symptoms with which the patient was affected, and without a moment's delay ruptured the membranes, and turned the child. The patient recovered rapidly.

Had Mr. Pskett been summoned to this unfortunate woman as soon as the alarming symptoms supervened, instead of several hours being allowed to elapse, it is more than probable that a valuable life would have been preserved.—I am, sir,

Your obedient servant,

J. M. B.

Greenwich, Nov. 30, 1844.

EFFECTS OF FUSEL OIL UPON THE ANIMAL ECONOMY.

IN the course of his inquiries into effects of volatile oils upon the animal economy, Professor Mitscherlich tried the influence of this product of the vinous fermentation and distillation upon several animals. Fusel oil is a colourless oily fluid, of a most offensive odour, and very distressing to the lungs. Its taste is sharp and burning; it is lighter than water, and is composed of carbon, hydrogen, and oxygen: it burns with a very brilliant flame. A few drops of liquid albumen being thrown into Fusel oil, a gelatinous mass separates, and falls to the bottom of the vessel; a few drops of milk thrown into it, fall as a white coagulum. Applied to the lining membrane of the stomach and bowels of a rabbit just killed, the cylinder epithelium of the small intestines appears to mix with difficulty with the Fusel oil, and forms an adhesive mass, which, under the microscope, is seen to consist of extremely minute globules. The tessellated epithelium of the stomach appears to comport itself in the same way. In the experiments, the dose of poison, (5j., ij., iv., and viij.) was thrown into the stomach of the animal by means of a syringe and elastic catheter.

1st Experiment. A grey rabbit, of middling size, had 5j. of Fusel oil thrown into its stomach. Immediately, and for a short time afterwards, the animal became extremely lively, and ran rapidly about, striking itself, however, against objects in its way, without appearing to observe them. The pulsations of the heart before the injection were 132 in the minute; half an hour later, the number could not be reckoned. About ten minutes after the animal had had the Fusel oil, it became depressed, could not stand erect, and fell upon its side, in an attempt to walk, so that I thought death was imminent. The animal lay apparently with-

out motion and feeling, but when I pinched the ear, which felt very warm, as, indeed, did the whole body, the animal raised its head with a great effort, but without power to hold it up; the head immediately fell down upon the table again. The breath of the creature was at first altogether without smell, but half an hour after the injection an intense odour of Fusel oil, which proceeded from the lungs, was perceptible; a circumstance which proclaims the passage of the poison into the blood. The animal lay in the state described for two hours and three quarters, after which time, on lifting it to lay it elsewhere, I observed some slight movements; the ears were also no longer so hot; shortly after, the power of moving increased, the creature seemed to be reviving; and, by and by, having crawled to the edge of the table, it fell off. Here it lay for a while, quite still, but in a while it raised itself, and made efforts to move away; the motions, however, were all miscalculated at first, and performed in a circle: the animal then recovered its power of moving its fore feet, dragging its hind legs after it; but this seeming paralytic state soon went off, and the animal was then in a condition to move as well as ever—it recovered completely. The same experiment tried upon another rabbit produced much less decided and remarkable effects; the animal was at first extremely lively, and ran about, indeed, but shewed no symptoms of stupefaction.

Two drachms of the Fusel oil were now thrown into the stomach of a very large rabbit. The first symptoms of its affecting the economy appeared a quarter of an hour afterwards; the animal showed signs of great restlessness, and moved hither and thither, but could always sit erect. In twenty minutes it stretched its fore legs out, and sunk its head upon them; it made no motion, when I seized it by the ears, which I felt, as in the first instance, to be very hot; the pulsations of the heart were extremely rapid, and scarcely to be counted; the respirations, on the contrary, were deep and slow; the breath smelt distinctly of Fusel oil. The animal now stretched itself out, and seemed to have no power of raising its head; and so it lay for four hours, apparently without sensation and motion, the pupils dilated, the breathing heavy, and the pulse rapid. Something like convulsive motions now appeared; but, by and by, the creature recovered the power of sitting up, and next of moving at will. In the night it was seized with pretty smart diarrhoea. The animal is now quite well.

The next experiment was tried upon a lively white rabbit, of middling size, with 5j. of the Fusel oil. It soon shewed every symptom of intoxication, to which succeeded great depression: the animal could

not raise its head, the pulsations of the heart, and the breathing, which had been increased, at first became slower, and the latter laboured. The animal lay for an hour and a half without motion or sensation; the respiration becoming slower and slower, and more and more difficult. The breathing then ceased, and the animal died; the pupil being much contracted. On laying open the abdomen five hours and a half after death, an intense odour of Fusel oil was perceptible. The stomach was not altered in colour externally; it was rather white and bloodless, than otherwise. The food in the stomach was covered with a thick layer of mucus. In the fundus of the stomach there was extravasation of blood, of a dark brown colour; this dark brown matter being scraped off with the handle of the scalpel, the white surface of the epithelium was exposed, beset with small brownish red points, which penetrated to the tunica propria, from which the extravasated blood appeared to have flowed; the tunica propria itself was bloodless, and in parts soft and pulpy. The duodenum, and upper part of the jejunum, were reddened, and filled with a white mucus, made up in great part of cylinder epithelial cells; the bladder was empty. The right side of the impregnated uterus was of a scarlet red; the kidneys were healthy and bloodless; the lungs somewhat redder than usual, and crepitated little, though they swam upon water. In a fifth experiment, in which ʒij . of Fusel oil were thrown into the stomach of a large rabbit, the animal did not remain more than ten minutes able to keep itself erect, and in ten minutes more it seemed insensible to any kind of stimulus applied externally; the respiration became laboured, and the animal died within an hour. When ʒss . of the Fusel oil was injected, the animal did not live more than a quarter of an hour; and when ʒj . was used, it died in four minutes. The same experiment tried upon a dog, ʒss . being the quantity used upon a young, and not very large animal, produced the same destructive effects in the course of six hours. From the whole of the experiments, it appears that Fusel oil is a true poison: in smaller doses it affects the sensorium in a remarkable way. It is highly stimulating at first, and induces a state similar to that induced by alcohol; it then depresses signally, and throws the animal into a kind of sopor. Fusel oil affects the stomach immediately, and the rest of the system by sympathy; the great rapidity of its action seems to vouch for this: the action of the poison would be slower, had it first to be taken up in the blood. The epithelium, and the entire mucous membrane of the stomach and bowels, were found destroyed; and the tunica propria so affected, that it

could be removed with a touch. There were, besides, extravasations of blood discovered, which proceeded from the vessels of the tunica vasculosa. Fusel oil, however, is also absorbed into the system; a fact proclaimed by the smell of the breath; and it is probable that in smaller quantities the poison produces intoxication, and its other remarkable effects, through the medium of the blood.—DR. EDWARD FURST, of Berlin, in *Medicinische Zeitung*, No. 23 and 24, 1844.

PARENCESTESIS THORACIS SUCCESSFUL.

A LAD, 13 years of age, had been long ill, as I was informed, when I was summoned to his assistance. I found the boy labouring under dyspnoea of the most aggravated kind, and scarcely able, with his utmost efforts, to fetch his breath. On examining him I found the left side of the thorax greatly enlarged, and could even perceive fluctuation through the intercostal spaces. I learned that the boy had had an attack probably of pleuro-peripneumonia, which left to itself, had ended in effusion of pus. The case was pressing and admitted of no delay; I therefore proceeded at once to perform parentesis thoracis, and gave issue to three pints of bad sanguinolent matter. The patient felt himself relieved, but the breathing still continued difficult, the cough distressing, and the expectoration scanty and bad. The patient went on in this way for four weeks, hectic having been meantime set up, a large quantity of matter flowing all the while from the wound in the thorax, which the patient was himself accustomed to open in order that by facilitating the discharge, he might find greater relief. About an inch and a half under the wound, a new collection of matter began to point, which could not be discharged by the old opening. I was therefore compelled to perform parentesis again in this new situation, after which the superior wound closed. The discharge from the new opening was at first great, and continued so for a long time, but then gradually began to diminish. The patient recovered his appetite under the use of a gentle restorative plan; he was at length restored to perfect health, and has remained well ever since.—DR. THORSTON, *Medicinische Zeitung*, No. 30, 1844.

UNIVERSITY OF LONDON.

DOCTOR OF MEDICINE, 1844.

First Division.

E. Ballard, University College.
J. H. Browne, Guy's Hospital.
J. J. Davies, London Hospital.
T. Inman, King's College.

W. Jenner, University College.
 G. Johnson, King's College.
 F. R. Manson, King's College.
 E. Meryon, University College.
 W. A. Raper, University College.
 G. A. Rees, St. Bartholomew's Hospital.
 J. Snow, Westminster Hospital.
 H. S. Ward, London Hospital.
 E. Wing, School of Physic in Ireland.

Second Division.

P. Martyn, School of Physic in Ireland.

BACHELOR OF MEDICINE—EXAMINATION FOR HONOURS.

Physiology and Comparative Anatomy.

R. D. Harling (Scholarship and Gold Medal),
University College.
 H. M. Webb (Gold Medal), Guy's Hospital.
 C. H. F. Routh, University College.
 W. T. Edwards, University College.
 G. W. Timms, University College.
 W. B. Herapath, Bristol Medical School,
and London Hospital.
 E. Hearne, University College.

Surgery.

H. M. Webb (Scholarship and Gold Medal),
Guy's Hospital.
 G. W. Timms (Gold Medal), University
College.
 P. Redfern, I, Surgeon's Square, Edinburgh.
 W. H. Parsey, King's College.
 E. Hearne, University College.
 W. B. Herapath, Bristol Medical School,
and London Hospital.

Medicine.

R. D. Harling (Scholarship and Gold Medal),
University College.
 P. Redfern (Gold Medal), I, Surgeons'
Square, Edinburgh.
 J. Evans, University College.
 W. H. Parsey, King's College.
 F. W. Marshall, University College.
 { W. B. Herapath, Bristol Medical School,
and London Hospital.
 { H. M. Webb, Guy's Hospital.
 G. W. Timms, University College.
 E. Hearne, University College.

Midwifery.

W. T. Edwards (Gold Medal), University
College.
 W. B. Herapath, Bristol Medical School,
and London Hospital.
 W. H. Parsey, King's College.
 H. M. Webb, Guy's Hospital.

Vegetable Physiology and Structural Botany.

H. M. Webb, Guy's Hospital.
 W. B. Herapath, Bristol Medical School,
and London Hospital.

APOTHECARIES' HALL.

Gentlemen who have obtained Certificates,
 Nov 28.—William Henry Meadows, Wit-
 nesham, Suffolk.—Henry Fowler Smith,
 Weyhill, Andover, Hants.—Robert Bowie
 Walcott, Barbadoes, West Indies.—Samuel
 Baker Rowland.—John Lescombe Crosby,
 Balsham, Cambridge.

MORTALITY OF THE METROPOLIS.

*Deaths from all causes registered in the
week ending Saturday, Dec. 14.*

ALL CAUSES.....	1201
SPECIFIED CAUSES.....	1196
I.—Zymotic (Epidemic, Endemic, and Contagious) Diseases, 226; among which, of—	
Small Pox	15
Measles	33
Scarlatina	47
Hooping Cough	26
Croup	12
Thrush	2
Diarrhoea	10
Dysentery	2
Cholera	0
Influenza.....	4
Typhus	28
II.—Dropsy, Cancer, and other Diseases of uncertain or variable Seat 108; among which, of—	
Inflammation	0
Dropsy.....	33
Scrofula	2
Cancer	9
Atrophy	14
Debility	17
Sudden Deaths	20
III.—Diseases of the Brain, Spinal Marrow, Nerves, and Senses, 158; among which, of—	
Hydrocephalus	22
Apoplexy.....	29
Paralysis	22
Convulsions	50
Insanity	0
Delirium Tremens	2
IV.—Diseases of the Lungs, and of the other Organs of Respiration, 444; among which, of	
Pneumonia	145
Hydrothorax.....	12
Asthma	65
Phthisis or Consumption	145
Diseases of the Lungs, &c.....	26
V.—Diseases of Heart and Blood-vessels	42
VI.—Diseases of the Stomach, Liver, and other Organs of Digestion, 78; among which, of—	
Teething	16
Gastritis	1
Enteritis	15
Tabes	6
Hernia	2
Disease of Stomach, &c.....	3
Disease of Liver, &c.....	16
VII.—Diseases of the Kidneys, &c.....	5
VIII.—Childbirth, Diseases of the Uterus, &c. 10; among which, of—	
Childbirth	7
Disease of Uterus.....	1
IX.—Rheumatism, Diseases of the Bones, Joints, &c.....	
X.—Diseases of Skin, Cellular Tissue, &c.....	0
XI.—Old Age.....	78
XII.—Violence, Privation, Cold, and Intem- perance.....	36

THE LONDON MEDICAL GAZETTE,

BEING A
WEEKLY JOURNAL

OF
Medicine and the Collateral Sciences.

FRIDAY, JANUARY 3, 1845.

CASES TREATED IN THE WESTMINSTER HOSPITAL

BY BENJAMIN PHILLIPS, F.R.S.
Assistant Surgeon.

Lock Jaw.—Tumor of the Jaw.

LOUISA RUSSELL, aged eighteen, was admitted into the Westminster Hospital, July 25th, under the care of Mr. White. She was a housemaid, and the account she gave of the attack was, that while eating of a mutton chop with her tea, she suddenly felt great stiffness about the mouth and throat, and a sensation as if a portion of the meat was wedged in the throat. After some efforts to relieve herself, she proceeded to the Hospital, complaining principally of the inconvenience in the throat. The house-surgeon desired her to open her mouth to enable him to make the necessary examination, when he discovered that the jaw was closely locked. An Enema of Opium and Assafoetida was administered, and the next day she was seen by Mr. Phillips.

Her state at that time was described in the following terms. The patient, a very healthy young woman, has the jaw firmly closed, the muscles about the pharynx rigid, and those at the back of the neck tense, and somewhat painful; the expression of the face is placid, the pulse is quiet, and the respiration natural; the abdomen is tense and tympanitic, but there is no tenderness at any point. She states that she has no headache, that she has never been ill, that she has never experienced any hysterical feelings, or cramp; that the menstrual functions have been discharged with regularity, but that the bowels have always been sluggish. There was no wound on the surface, and she could not recollect that she had received any injury of any kind, and there was no mental disquiet. After a very careful examination of the circumstances, Mr. Phillips

came to the conclusion that the attack was probably of an hysterical character.

He directed that the bowels should be stimulated by irritant injections, and that a large dose of Calomel should be got upon the tongue.

July 26th.—Enema Terebinthinæ statim.
Hydrarg. Chloridi, gr. vj.

On the evening of the day after the action of the enema, and about thirty-two hours after the development of the trismus, she fell asleep, and when next seen by the house-surgeon the jaw was relaxed. Soon after this she awoke, and then the trismus was reproduced, but by morning it had yielded again.

27th.—At the hour of visit, the spasm is less marked than it was yesterday. The muscles of the jaw are less tense, the mouth can be opened sufficiently to allow of the tongue being protruded: the muscles of the pharynx are less rigid, and the tension of those at the back is much abated. The pulse is 82.

The bowels have acted freely, but the evacuations have been offensive; there is less distension and tympanitis.

To have another Turpentine Enema, and to take ʒj. doses of Tinct. Valer. Ammon.

28th.—The trismus has entirely ceased; during the last twenty-four hours, however, it recurred twice, but it was slight, and soon disappeared. She is now free from any spasmodic action, but there is still a fulness of the abdomen.

To take Hydrarg. Chlor. gr. ij.; Pil. Galb. Co. gr. v. at bed-time; and an aperient draught in the morning.

From this time she was convalescent.

30th.—She complained of soreness in the throat low down; a sensation as if something were lodged there. Nothing could be discerned, but on several occasions a little grumous matter was spit up.

She remained in the hospital until that inconvenience disappeared, and her bowels had been got into a less sluggish state; when she was discharged, cured.

REMARKS.—When Mr. Phillips saw the case, he conceived it to be hysterical; the treatment was based on that opinion, and the result seemed to justify the conclusion.

The absence of any injury, of mental discomfort, or exposure to cold, and the suddenness and completeness of the lock jaw, together with the age of the patient, determined the opinion; at the same time there was no clear evidence of any previous hysterical condition, and the general health was apparently very good; the uterine functions were regularly performed. The occurrence of lock jaw in the absence of a wound, or other injury, is comparatively rare, but so varied and singular are the features of hysteria, that there is scarcely any disease which it may not simulate. Mr. Phillips mentioned a case which he observed some years ago, where amaurosis of the left eye occurred as a consequence of an injury to the left radial nerve; it persisted for several weeks, and then suddenly vanished. He also mentioned a case which occurred to him a week or two previous to the preceding case, and which he believed to be hysterical.

A young woman who on the previous night had taken a colocynth pill, went to the water closet, where she remained long enough to cause alarm. Calls at the door were unheeded, and it was forcibly opened, when she was found leaning back insensible. She was immediately removed to a bed; salvolatile was administered, and a certain amount of consciousness returned. She evidently comprehended all that was said to her, and attempted to answer questions, but all her efforts ended in the utterance of inarticulate sounds, although she could project the tongue in a right line. After many such attempts she became a good deal distressed, and a paroxysm of crying followed. Upon further examination it was discovered that there was complete dextral hemiplegia. It was treated as hysteria; mustard was applied to the epigastrium, and drastic purgatives, with antispasmodics, were exhibited internally. Within two hours she could use the right leg; within four hours speech was restored; but the natural functions of the hand were not restored for more than a week. It is possible, of course, that the preceding case was something more than hysteria. The mode of its occurrence might lead to such a conclusion; but the result seems to lead to the impression that the original view of the case was correct.

With respect to the case of lock-jaw, thirty-two hours had scarcely elapsed before

the spasm was completely relaxed, but after that there were two slight relapses.

It was suggested by Mr. White, that from the mode in which the spasm occurred, there might have been some jar or strain upon the pterygoid, or some other muscles of the jaw, so as to produce cramp. Of course such a thing may be possible, but although such jars must be common, we are not aware of any case which acknowledges such a cause. There was no reason to think, either, that she suffered from worms, which have been by some persons regarded as occasional causes of tetanus; and beyond what has been stated, there was no circumstance present to throw any additional light upon the cause of the attack.

Mary B., æt. 24, a widow, was admitted under the care of Mr. White, July 16, 1844, with a tumor of the lower jaw extending through the space which had been occupied by the bicuspid and two molar teeth of the right side.

She states, that about three years ago, she suffered very much from what she supposed to be toothache, and that three teeth had been removed for the purpose of giving relief. Still the pain continued. After a time, however, it gradually abated. About a year after the extraction of the teeth she first became sensible of a swelling of the jaw; it slowly increased without much pain, except at night, when she was often kept awake by its severity.

A variety of remedies had been used for the purpose of checking its increase, but without effect, when she was told that the only thing that could be done for her was to remove so much of the jaw as was implicated in the disease. After this she was admitted into the Winchester Hospital; but after a time discharged without relief. On examination after her admission into the Westminster Hospital, a tumor was found extending from the canine tooth backward as far as the last molar, and projecting towards the cheek externally, and slightly pushing aside the tongue internally. The tumor gives her very little uneasiness during the day, but it is painful at night. Her general health is good, and she is very willing to submit to any means of relief that may be recommended.

A consultation was held upon her case, and it was agreed that the only plan of treatment which promised success was to remove so much of the jaw as was implicated in the disease.

On the Saturday after her admission, Mr. Phillips proceeded to operate in the following way. An incision was made from the angle of the mouth to the inferior border of the lower jaw, and terminating about an

inch from the symphysis. Another incision extended along the inferior border of the jaw, from a line in front of the facial artery, to form a junction with the first incision. The flap was turned back and retained by an assistant. The soft parts were then cut through to the bone at the two points upon which the saw was to be applied.

A very ingenious circular saw was used to cut through the bone; what remained was broken down by the forceps, and the piece, which included the entire thickness of the jaw, was removed without difficulty. The flap was then laid down and scoured by a single point, but the wound was not definitively brought together till the evening.

There was not much hæmorrhage, and the patient bore the operation well. It occupied about five minutes in the performance. The sutures were removed on the third day, with the exception of one; the greater part of the wound being united. The only part in which adhesion had not taken place was a small point near the masseter muscle. The case did very well, and at the expiration of six weeks the patient left the hospital well, with scarcely any appearance of deformity, and able to masticate soft substances. The space between the cut extremities of the bones seemed to have lessened a good deal since the operation, and there was a dense substance developed between them.

REMARKS.—The appearance of the tumor in this case, as well as the history, induced Mr. Phillips to regard this as a case of epulis. The only point calculated to cause any doubt of its nature was the very regular fusiform character of the enlargement. The soft parts, however, were unaffected, and there did not appear to be any thing to militate against the operation. It was therefore performed, and was well borne by the patient. A piece of the jaw, including its entire thickness, and somewhat under two inches long, was removed. Upon examination it presented a central softening, and a good deal of the character of osteo-sarcoma.

The case did remarkably well, and by the fifth week a tolerably dense fibrous mass connected the cut portions together, and enabled her at that early period to masticate soft substances.

An opportunity was presented for examining a jaw from which Mr. Phillips had removed a similar piece of bone two years before. The patient was between fifty and sixty, and the connecting medium appeared to be almost as dense as bone. He could masticate the hardest food, and could even crack a nut on that side.

SOME OBSERVATIONS

ON THE

MEDICAL TOPOGRAPHY, CLIMATE, AND DISEASES, OF THE BIGHTS OF BENIN AND BIAFRA, WEST COAST OF AFRICA.

BY W. F. DANIELL,

Member of the Royal College of Surgeons of
England, &c.

(For the Medical Gazette.)

Χωρέων δὲ θέσιν καὶ φύσιν ἐκάστων ὠδεῶν διὰ γινώσκειν.—'ΙΠΠΟΚ. περὶ Διαιτήης, β.

WHEN we refer to the annals of history, we find that the Portuguese and Spaniards were from a very early period familiarly acquainted with the greater portion of the western coast of Africa. They appear to have been uniformly actuated by the narrow-minded policy of the adventurers of that age, and indeed of much later ages; they neglected no precaution whereby they might secure to themselves the rich field of commerce, which was there displayed to their admiring gaze, and used every means to exclude other nations from partaking in its varied resources. A few years, however, must have demonstrated the fallacy of these expectations, for we find in the year 1553, records of an Englishman, of the name of Wyndham, trading in the Rio Formosa for pepper, and other indigenous productions, in conjunction with a vessel belonging to the Portuguese. From this period, British influence may be said to have gradually extended itself over the Babel of petty kingdoms that stud the shores of Western Africa, from the Gambia to the equator, and from thence to the Cape of Good Hope; the supremacy, trade, and prospects of earlier discoverers, waning rapidly under the influence of successful rivalry.

A glance at the mercantile relations of Great Britain with this portion of Africa, will shew how extensive and important the connexion has become, especially since the commencement of the present century. Were it not for the fatal insalubrity of climate, so destructive to the European constitution, where life is not forfeited at once, it is impossible to say what extent our commercial intercourse would have acquired with the inland regions of the vast continent of Africa, which lie at this moment unexplored and unknown. The

rivers which empty themselves in the Bights of Benin and Biafra nevertheless receive from sixty to seventy vessels of considerable burden annually, which employ several hundred seamen, and, carrying out freights of the manufactures of this country, return with cargoes of palm oil, ivory, dye-woods, and other articles of price.

Although this portion of the coast of Africa is so much frequented, and so large a quantity of its produce is transmitted year after year to English ports, it is surprising how little information we have relative to its topography, seasons, capabilities, natural productions, inhabitants, &c. This, however, may in some measure be owing to the individuals who visit that country being rarely possessed of the kind of education which he who travels into new and little known regions ought to have, and partly also because it is not always held prudent among trading communities to promulgate information which might possibly conjure up a host of competitors. And then it is certain that in many instances those who were most competent to give information upon the countries of Central Africa have been the victims of its unhealthy climate.

It is much to be regretted that the causes of the insalubrity of Western Africa, and the pathology of its maladies, should be so imperfectly understood at the present time, since the preservation of life ought surely, above all others, to have been made the subject of most serious consideration.

During my residence in several of the rivers which form what is termed the delta of the Niger, and when anxiously engaged in my professional duties, I have often painfully felt the necessity of a work of reference which might throw some light on the disorders that were endemic in those districts, but I must confess that I have found nothing to aid my investigations on this important subject. This hiatus I have now essayed to fill up by the few succeeding hasty and, I fear, imperfect sketches. I am fully aware of the deficiencies that must almost necessarily be apparent in them, but I trust that the motives which have led me to come before the profession will plead in some degree for all imperfections of style that may appear, and that the facts and observations I have to offer

may contribute to the benefit of those who are obliged to visit the coast of Africa. I shall also enter at some length into the host of pestilential diseases which there prevail, and which prove at periods far beyond the control and best efforts of human skill. Had it not been for the confidence inspired by a practice successful in the great majority of cases, my inclinations would have prompted me to let the subject fall into other hands more competent to discharge what I believe to be an imperative duty.

In referring to the publications which have appeared during my absence from England, I accidentally met with a series of papers on the fevers of the Gambia and Sierra Leone; since my return I have also perused the work of Mr. Boyle, which I had not done previously. The papers on fever by Dr. Burton, communicated in the *Provincial Medical Journal* for 1842, certainly afford the most correct and comprehensive delineation of the affections endemic to our African colonies; and many of his views are in perfect accordance with my own, while others are greatly at variance. Of course, considerable allowance must be made for differences of situation, geological distinctions, and the circumstances under which he has studied African fever. Circumstances always essentially modify the characters of tropical diseases. It may be also necessary to state, that although a remarkable coincidence frequently occurs in the mode of treatment between Dr. Burton and myself, yet I was thoroughly convinced, from practical experience several years before the appearance of his sentiments, that the means I had adopted were the most efficacious that could be used. More recently, and since the preceding passages were written, the *Medical Reports of the Niger Expedition*, by Drs. McWilliam and Pritchett, have been published.

Although the diseases which prevail on the west coast of Africa may be considered as but few in number when placed in contrast with the more varied and comprehensive series of European maladies, yet they are not the less entitled to our attentive consideration: in point of interest there is, perhaps, no class of morbid affections to which the human frame

is liable which demands greater attention, or requires a more studious investigation, than those of which I am about to treat. At present, little progress has been made in the ample field of pathological science presented by the African continent; it is only recently that the few works which profess to allude to the subject have appeared, and they, like all rudimental treatises, afford but very partial general summaries, the principal object proposed being usually little more than a meagre description of those diseases which are prevalent in our colonial settlements in the higher latitudes of this continent; the lower, or equatorial division of the coast, being left entirely uninvestigated.

Experience has already demonstrated the fact that of all those tropical countries visited by Europeans, Africa is that which is most deadly. The humidity of its atmosphere, and the high range of temperature, conjoined apparently with exhalations due to the decomposition of vegetable matter, conspire to render it singularly inimical to European constitutions, and to make it the theatre of a class of diseases differing from any that have been observed in other quarters of the globe.

[To be continued.]

NOTICE

OF

THE MEDICAL ORGANIZATION, STUDIES, &c. IN ITALY.

By EDWIN LEE, Esq.

(For the *Medical Gazette*.)

[Continued from p. 352.]

Universities.

CONSIDERED in an abstract point of view, each university presents itself to the observer under a twofold aspect—as an academical body charged to watch over the progress of science, and as an instructing body occupied in diffusing knowledge according as the populations are adapted to receive it. At Genoa, and at Turin, a supreme direction of public instruction, termed *Magistrature della riforma*: in Tuscany, a college of Doctors; in Lombardy, an Aulic Councillor, directly commissioned from the Governor of Vienna: at Rome, the *Sacra congregazione degli studi*, with an Arch-Chancellor at its head: at Naples, a Junta, presided over by an

archbishop: at Parma, and at Modena, a Grand-Master: such are the authorities which bind the universities in Italy to the government. Being purely moral or political, they offer, in this respect, a great difference with the Royal Council of Public Instruction in France, which is composed of men purely special: their office, as stated in the ancient and modern regulations, consists, as is expressed in those of Turin, in taking care that nothing is publicly taught but sound doctrines, not opposed to religion, to the rights of the King, or of the Crown: hence with them rests the appointment of professors and the direction of the studies. Primary, secondary, and superior instruction—all is dependent upon them. The members of these institutions have never themselves belonged to the professorate; not one of them is a theologian, jurisconsult, physician, or mathematician, in the strict acceptation of the term*.

At Genoa and Turin, the chief president of the reform may be truly regarded as the minister of public instruction. He receives his orders directly from the King; these are transmitted by brevet, by letters patent, or *vivavoce*: in the two former instances, they are countersigned by the minister of the interior. In other parts of Italy the President of the Commission of Instruction works with the head of the state; but as the President (a worthy representative of the commission itself) does not possess special knowledge sufficient to consider the wants of instruction in a practical point of view, these are for a long time passed over, or badly understood; the position of the professors does not appear to be sufficiently elevated for them to be called to take part in the direction of matters of which they ought to be the legitimate judges. The members of

* This may be the case in some states, but it is denied by Professor de Renzi with respect to Naples, where the Junta of Public Instruction has not merely the mission of superintendence of public *morale*, but has the care and direction of the studies, and proposes to Government the requisite reformatations or alterations of the course of instruction. Its members are selected from among the professors of the different faculties, those being preferred who are distinguished by talent, probity, long experience, and public approbation. Hence the Junta is composed of theologians, jurisconsults, physicians, mathematicians, and *letterati*, and cannot be liable to the abuses indicated by M. Combes; being, in fact, very analogous to the French Council of Public Instruction.

the Grand Council of Studies belong to the higher orders of society*. A name is required for them, rather than talent and experience. What has been said of the directing principle of the Italian universities is applicable in great measure to their purely professional character, which varies in different countries; for although each university usually comprises four divisions, viz. theology, law, medicine, and the belles lettres, there are some (as at Pavia) in which the first of these faculties is not joined to the other three, inasmuch as in Lombardy the political is separated from the religious powers in some respects: on the other hand, at Genoa, Modena, Rome, the Catholic authority and instruction predominate; while in Tuscany, the different branches of the healing art have an evident supremacy. In the University of Genoa the faculty of medicine and surgery ranks after the faculties of theology and jurisprudence; its doctors, masters, members of colleges, or professors, hold a subordinate position in society. Restricted within the limits of their humble and but little lucrative condition, none are called to fill public offices unless immediately within their speciality. It was regarded as a circumstance without precedent, and as a phenomenon, that Dr. Scassi, who was *prefet* of Savona under the empire, should have obtained, in 1814, the title of count, and should have been appointed syndic of the city of Genoa.

Is it sufficiently known what are the results of this state of things, and the consequences of the low estimation in which an entire class of the population is held? Is it not perceived that this class isolates itself from the rest, and that all its habits and acts form a continual protest? Thus, when an extraordinary danger presents itself, or when it becomes a question to make head against a common enemy, or one of those circumstances occurs in which honour alone can retain men at their post—as a disastrous epidemic, a pestilential fever—the physicians will refuse to join themselves to those who would not admit them within the pale of social fraternity. For this reason the greater number of the Genoese prac-

titioners left the city on the invasion of the cholera.

The divisions generally adopted in instruction are, anatomy, physiology, pathology, practical medicine, surgery, *materia medica*, medical jurisprudence, and hygiene; to which are added, as accessory, chemistry, medical physics, natural history, and pharmacology; thus forming twelve professorships. In Italy this number is in some places greater; in others it is less: thus in Piedmont and in Tuscany the faculty of medicine has only ten professorships; in Rome and Bologna there are eleven; fifteen at Pavia; and eighteen at Naples. At Florence and Pisa descriptive anatomy is subdivided into human and comparative anatomy; and at Pavia microscopic anatomy is added. In the latter city, as also at Naples, theoretical and practical ophthalmology are joined to surgery. In the faculties of the Austrian States, and in Tuscany, the principles of the veterinary art are taught. Here, likewise, is a professor for the history of medicine.

In many towns of Italy there are secondary schools of medicine, but they have not the same degree of importance as in France, and their courses of instruction are very circumscribed. In some parts, more especially in Tuscany, the theoretical studies are separated from the practical. The examinations take place at Pisa and at Sienna, where the title of Doctor is conferred; but the clinics are at Florence, and these must be followed two years before the *exerceat* is granted. Lectures on other branches are also given at Florence, as well as the clinical courses in the hospital of Santa Maria Nuova.

Of the different examinations required in a faculty of medicine in Italy, one alone is public; viz. that of the discussion on the thesis, to which the same form is given as in the French schools, except at Bologna, at Rome, and at Modena, where it consists in a simple programme of questions without any dissertation. All the other trials take place with closed doors, before four examiners and a president, who has the casting vote, but does not examine. Each professor examines upon the subject-matter of his course, the questions being drawn by the secretary. The examination takes place in the Latin language. Each

* This is not the case at Naples.

examination lasts three hours; at the expiration of which the candidate retires previous to the formality of admission or rejection; to decide upon which each examiner has three balls, a white, a red, and a black one. The first represents three favourable points, the second two, the black ball signifies only a negative vote. Ten points are required for the admission of the candidate. If the number be less than this, his rejection is pronounced: this frequently occurs, and the rejected student is adjourned (*aggiornato*) for a year. In Piedmont a second rejection incapacitates the candidate from again presenting himself for examination.

At Genoa the circumstances connected with the admission to the doctorate deserve to be noticed.

The candidate receives a series of questions, which he is not required to develop, but contents himself with studying and meditating upon them, in order to maintain them on a fixed day before the doctors of the college charged with the augmentation, as also before an unlimited number of the professors, who, however, take no part in the discussion, but have the right of voting. The candidate is considered as the representative of the doctrines in which he has been instructed, and is accompanied by his master, who is termed the *promotore*, and assists in the discussion, taking the candidate under his patronage. When the discussions are over, and the candidate is admitted, the *promotore* makes an oration in his praise, reminds him of the duties, and, investing him with the emblems of his new condition, reads to him the form of the required oath, which the new doctor repeats upon his knees. The faculty of Montpellier proceeded much in the same manner before 1830; and notwithstanding the criticisms of the *promotore*, this imposing ceremony, it is asserted, exercised great influence on the future career of many individuals.

A glance at the names of the authors of the works recommended to Italian students may serve as a means of estimating the condition of medical doctrines in this country. In the accessory sciences and surgery, there are but few authors of note in Italy; not but that there are celebrated chemists, naturalists, and surgeons, but in this respect Italy is much inferior to France, which abounds with distinguished

names in these departments; whereas in Italy these form rare exceptions to the generality. Hence in all the courses of chemistry beyond the Alps, the names of Thenard and Orfila are frequently heard; their works form the text-books of the classes, and are in all the libraries, and their busts adorn many laboratories. The names of Gay-Lussac, Prevost, and Dumas, may also be cited, though their books are restricted to a more limited circle of readers. Orfila is almost exclusively quoted in toxicology. In botany, the names of Linnæus, Jussieu, Decandolle, and Mirbel, are those most frequently cited.

With respect to surgery, the superiority of France is also not to be contrasted; Sabatier, Boyer, Dupuytren, Delpech, Velpeau, Roche, and Sanson, with several others, constitute the ordinary guides of Italian students. The same also holds good in great measure with regard to obstetrics.

In medicine, properly so called, a contrary tendency is observed. The influence of the different French schools, and of the systems of their chiefs, is less experienced. The predominating principles are derived from Germany, except in those instances where they originate from Italians. Thus, physiology has derived a great impulsion from the ideas of Gallini, Tommasini, and Medici: thus internal pathology, practical medicine, and the clinics, are divided into two parties; in the one, the study of the works of Rasori and Tommasini are recommended, and their doctrinal supremacy is extolled; in the other, the ancients are the only models for imitation; as Baglivi, Sydenham, Torti, Stoll, &c.: and nearer to our own times, the German celebrities, with P. Frank, (formerly professor at Pavia) at their head; G. Frank, his son, Hartmann, Hildebrand, Raimann, and lastly, the best known among the Italian physicians of the present day, Buffalini, and Paccinotti. The organical classifications, as adopted a few years ago in France, are not reproduced in the public lectures; Andral is the French pathologist most in repute among the Italians; in fact, his doctrines serve as an intermedium between the pure vitalists and the anatomopathologists—joining that which was to that which is. Foreigners, however, are apt to fall into a great

error, in regarding as the sole representatives of French medicine one or two celebrated names, and in thinking that this is entirely restricted to Paris. Doubtless the greater number of works relating to the healing art are accumulated most easily in the capital, by the fact of its being the point of scientific centralization; but these works are far from being homogeneous; and what a vast difference, for instance, separates MM. Bouillaud, Bisseau, and Andral, on the one hand, from MM. Chomel, Cayol, and Recamier, on the other. In other parts there are likewise to be found acute and faithful observers, as also powerful minds, profound generalizers, having each their peculiar individuality. In the same sense perhaps it might be said that Rasori represented Italian medicine.

The most ancient trace of the organisation of universities in Italy is to be found in the denomination of the different grades. Thus, at Pavia, that type of the ancient universities, a man who possesses the title of rector, rector magnificus, has the direction of the studies, and the superintendence of the *personel*. The same rank also exists in Piedmont, and is directly conferred by the king: at Rome a rector is appointed by a delegation of the college of consistorial advocates, and is confirmed by the pope, whereas at Naples this office is about to be superseded by that of the President of the Central Commission; and at Parma, there are substituted for it four *Priori*, each having the superintendence of a faculty. In Tuscany, after the Prince, there exists a sub-intendent, a purely administrative functionary, who is represented at the head of the different faculties by a *Preposto*, who is usually selected, like the rectors, from the professors, who, however, take no part in his election. He holds the office for one or two years, as in Lombardy, where there are, besides, an Academic Councillor, the Director of the Studies, the Deans of the Faculties, after whom come the Professors.

It may be boldly affirmed, that, in general, Italy has not bestowed upon these latter any of those honours formerly so prodigally lavished upon her poets, painters, musicians, and sculptors; abased almost to the rank of simple handicrafts, regarded as men who make a trade of science, the members

of the faculties are but little esteemed in the world—at least as such. In Piedmont, the professorship is acquired without competition; the king appoints an individual on the presentation of the supreme delegation of the studies, which may afterwards displace the person whom it has caused to be nominated; no guarantee is previously given to the professors, no legal protection is assured to them; they exist entirely dependent upon the good pleasure of others, without any resource against injustice. Such a position is more painful, more precarious, and uncertain, than that which is said to have been the lot of public functionaries in France at the time of the great revolution.

The following is the mode in which professors are nominated in Lombardy:—

When a chair becomes vacant the Austrian governor is informed of it. Immediately the Proto-medico of Vienna transmits a series of questions, which are placed beneath the eyes of the candidates. When these are answered with all the precautions indicated by the *concours*, isolation, surveillance, a fixed period, &c., they are sent to the university (Pavia, or Padua) where the vacancy does not exist, with an epigraph, or other conventional sign attached to each memoir, in order that the author may remain unknown to the judges, who pronounce their decision on the memoirs, and class them according to their merit: the names of the three first candidates thus recommended are submitted for the royal sanction, and there is not an instance of the person whose superiority has been declared by the university decision not obtaining the vacant post.

The salary of professors in the schools of medicine in Italy varies greatly. In some faculties it amounts to upwards of 5000 francs, whereas in others it is not more than 500 or 600. In Pavia, the three professors of clinical medicine, clinical surgery, and general pathology, receive each 5000 francs a year; the professors of obstetrics, chemistry, special therapeutics, ophthalmology, human anatomy, and physiology, have 4600 francs; those of natural history, or of medical jurisprudence, 3900 francs; those of botany, and the veterinary art, 2600. At Genoa the profes-

sors of medicine and surgery receive a fixed salary of 1333 francs; a sum of 600 francs is granted in addition to the professors of clinical medicine, anatomy, and materia medica, for the right of examination; the other professors have somewhat less for the same right. Each professor has a retiring pension, after fourteen years' service, equivalent to half his salary; this is increased a fourteenth every year, so that in the twentieth year it amounts to the original sum: this plan has the advantage that when an individual is advanced in life he has no interest in occupying a post to which his powers may be unequal.

At Naples, the professors of all the faculties have an equal salary; for the first year, 400 ducats salary, and 200 gratification, (total 2600 francs); in the second year the salary is increased by 100 ducats: the directors of the clinics and of the cabinets have besides 400 ducats a year.

In the university of Naples there exists a dean for each of the five faculties. His office lasts two years. The college of deans consists in the meeting of the whole five, for the purpose of proposing improvements in the courses of instruction, and for the maintaining the discipline and general regulations. This college examines every three months whether any abuses have been introduced into any part of the service. At the head of the university is a rector, chosen from among the professors, and holding the appointment for two years. He presides over the college of deans, watches that the professors perform their duties, prevents and rectifies disorders, is present at examinations, keeps the great seal of the university, which he represents upon public occasions, convokes the faculties for the examinations, and receives the oaths of those who are admitted members of the faculties. He is, moreover, bound to render a strict account of the university to the President of Public Instruction.*

Professors in Italy, when absent, or from other causes incapacitated for a time from performing their duties, are supplied with a substitute, who in Lombardy is selected by the professor from a list of three names, and the nomination is confirmed in Vienna; the office being held for a year, or at most two years. In the Pontifical States, each

faculty has a substitute attached to it that of Jurisprudence has, however; two; they are elected by concours, and have a legal right to the first chair vacant in the faculty to which they belong. In Naples, each professor has his substitute, who is elected by means of public competition (concours), which is as severe as that for the professorship; they receive some compensation, and their title gives them the preference in the concours for the office of professor. In some places, when a professor cannot continue his lectures, intimation of the circumstance is sent to the substitute by the Prefect of the Studies, who notifies to him the method which he is to follow, as established by the professor whom he represents. Thus he is obliged to restrict himself to a mere repetition of the text of another. This inferior grade of the instructing body is not merely established for the purpose of providing against an interruption of the courses, but is sometimes, as in Piedmont, and in Tuscany, charged with the examinations; and this, in point of fact, is the proper office of the College of Doctors, who are analogous in some respects to the *agregés* of the French faculty; but their rights are more restricted, and they are not allowed to give private courses of lectures. The doctors of the college are eighteen in number; twelve doctors of medicine, and six doctors in surgery. The possession of a diploma, and a certificate of two years' private practice, are the conditions which give a claim to admission as a doctor of the college; the selection from the claimants depending upon the other titles which they may possess—the works they have published, or the services which they have rendered, of the value of which the supreme deputation of studies usually pronounces on the attestation and warrant of the professors. In some instances, however, the king directly appoints individuals as members of the College; thus Doctors Viviani, Silvestri, and Campanella, were admitted into the College at Genoa as a compensation for their services during the cholera.

From what has preceded, it may be perceived that in Italy elections in the instructing bodies are determined more or less by the method of concours. At Naples, the archbishop, in his project of reform, has proposed a new combi-

* Professor de Renzi's notes.

nation of the two methods (concours and nomination); viz. the opening of one of these scientific contests in all cases in which the estimation of the titles of a candidate would not evidently entitle him to be nominated at once. In every other case a marked tendency exists for the adoption of this mode of election in its most absolute sense.

The concours, it is said, prevents the entrance into the list of candidates of men of real and recognised merit, especially if they have arrived at a certain age, because such would not enter into a contest with young men without fixed position or reputation, and who have nothing to lose by failure.

To proclaim the concours as a perfect institution is to accord it a merit which no one would grant it; consequently one need not be surprised that its warmest partisans admit the abuses which may accompany it; and the valid grounds of some objections, as, for instance, that above cited; but, on the other hand, what advantages does it not present? Foremost among these advantages may be mentioned the consecration of the principle of equality before the law, which principle has its application in the present instance by the admission of all those who possess a diploma; each individual in this manner, alone, and without any other protection than his personal merit, without any other support than the confidence which a well-followed course of studies supplies, has afforded to him the opportunity of coming before the public, and making himself known; whereas, if this opportunity were lost, he would have remained unknown and lost among the crowd. On the other hand, the trials should impose the obligations of exhibiting spontaneity or erudition, which two-fold end is obtained by means of improvised discourses and writings.* It may be said that a facility of language, (that sort of *prestige* which cannot be sufficiently guarded against) would often enable ignorant but audacious presumption to silence and eclipse modest and timid erudition: and this reproach might be allowed to be just, if the persons called upon to

judge upon the respective merits were not by their position guarded from the influence of a similar seduction. Those accustomed to the practice of teaching, being obliged every day to give to things a higher value than that of words, are readily able to discern in a candidate the groundwork and the form; the intimate knowledge, and the manner; the principal and the accessory. Hence, there is no fear of their being deceived, because none better than they know how to distinguish between the readiness in speaking, the habit of expressing without logic or synthetical ideas, from the ready eloquence which is the consequence of a good method of philosophising.

It would, however, be wrong to undervalue the power of language, as regards teaching: here, it is not sufficient to know, but it is likewise requisite to be able to explain the ideas, and to divulge the knowledge acquired in the silence of the closet; and how can the best informed fulfil this condition, if he does not possess the full gift of speech? This likewise applies to the precious faculty of expressing one's thoughts with the pen; a professor should possess some of the qualities of the literary man:—the phrase of Buffon, *the style shews the man*, is specially applicable to him; the written proofs of the concours indicate beforehand the form which the professor would give to his lectures, at the same time that they supply a manifest evidence of his intelligence and erudition. All these advantages are united on the occasion of the thesis, which is also a solemn circumstance in which the candidate shows himself in the fulness of his individuality, and in which is revealed his mode of thinking, speaking, and writing.

There only remains to reply to the objection that youth may deter those of maturer age from offering themselves; that rising talent may eclipse merit in its force and power. These assertions are partly true; hence they must be taken into consideration, but as exceptions, and only because in every case the exception confirms the rule.

It will be readily understood that some scientific and celebrated characters would not risk themselves in the honourable, but always difficult trial,

* The author has not sufficiently reflected that this kind of trial does not well resolve the problem, whether the candidate makes an exhibition purely of *memory* or of *knowledge*.—Note of Translator.

of the concours, and expose themselves to the uncertainty of the result to which it may give rise.

It must also be remembered that eminent men, these exceptional persons, are produced much more easily when they already belong to public instruction: the professorship, in procuring for them a higher reputation, impresses upon them the duty of increased knowledge, and greater obligations; publicity becomes at the same time a guarantee and a means of emulation.

The following are among the propositions made on the subject of elections by Signor G. Mazetti, President of the Public Instruction at Naples:—

“The titles in virtue of which professorships might be directly conferred, shall be—1st, the works, and the productions which have been received favourably by the public, or approved by some celebrated Academy; 2d, a service relating to instruction, in which proof has been given of knowledge and zeal; 3rd, the trials of a former concours for a professorship of the university; 4th, literary avocations exercised honourably and ably in the public service.

“When a chair becomes vacant in the royal university, the President of Public Instruction shall announce, by means of advertisements in the Journals, and at the University, that the selection is about to be made, in order that each candidate should send in his name and claims within the given period.

“The candidates’ names having been collected, the president, and the commission charged to pronounce upon their morality, shall examine the claims of each, according to the preceding regulation; they shall then make a list of those who are eligible to be presented to the minister and to the king, indicating opposite each name the chief reason of their choice.

“If his majesty should not think proper to appoint any of the persons proposed, the concours shall be opened, to which the proper candidates shall be admitted.”

[To be continued.]

THE PERIODICAL MATURATION AND EXTRUSION OF OVA, INDEPENDENTLY OF COITUS, IN MAMMALIA AND MAN,

PROVED TO BE

THE

PRIMARY CONDITION TO THEIR PROPAGATION.

By TH. L. W. BISCHOFF,

Professor of Medicine, and Director of the Physiological Institute at Giessen, &c. &c.

To the Editor of the Medical Gazette.

SIR,

THE accompanying is part (about a fourth) of an essay from the pen of Professor Bischoff, of Giessen, late of Heidelberg) the importance of which struck me on my first receipt of it from my friend, the author, in the commencement of the past summer, and which I then formed the intention to translate. Should you rate its importance in a physiological and medico-legal point of view as highly as I am led to do, and consider it desirable for the MEDICAL GAZETTE, I shall feel great pleasure in furnishing you with the remaining portion.

I am, sir,

Your obedient servant,

HENRY SMITH,

Fellow of the Royal College of Surgeons, and Surgeon to the Royal General Dispensary.

17, Henrietta Street, Cavendish Square,
Dec. 21, 1844.

Whoever occupies himself with the history of the various theories of generation must quickly perceive the foundation of most of the errors in that department to be, and to have been, without doubt, a want of acquaintance with the primary formative material for the future being, the ovum, and its pre-existence in the ovary, entirely independent of coitus in mammalia and man, which have engaged the greatest share of interest. This necessarily induced a distinction and a gap of separation between mammalia and man on the one side, and the rest of the animal kingdom on the other, which, indeed, many observers endeavoured to repair and fill up; but the importance and necessity of objective information presented themselves with such force, that for this very reason the greatest and most illustrious authorities remained in doubt and error. There are probably few subjects which prove the dependence of human knowledge upon objective investigation in a more striking man-

ner than that which is now in question. Philosophers, theologians, doctors, and naturalists of every country, have laboured to overleap this little deficiency of the objective proof of the ovum in mammalia and man, and all their speculative cogitation, all their combinations and theories, led them into obscurity. All the world became firmly convinced that mammalia and man formed an exception to the mode of development of the rest of organized beings, and to the conditions to which they are subject.

We observe universally with respect to other animals and to plants, that, with proportionately very few exceptions, their propagation is so conditioned, that the older primitive organisms produce certain materials, ova and fecundating material, from the reciprocal influence of which upon each other, the germ, endued with the capacity of development, (*entwicklungsfähig*) results. At the same time, we further observe, as an universal rule, that the formation and coming into contact of these two generative materials, however necessary both may be for the maintenance of the species, are nevertheless quite independent of, and, in reference to each other, for the most part quite accidental. The ova form, and become mature, and are extruded from the maternal organism usually at fixed periods, having regularly recurring intervals, quite independently of the formation and maturation of the fecundating material in the male, which takes place either in like manner periodically, or even continuously. By the operation of accessory circumstances dependent on external causes, and which may either arise absolutely from without, and be entirely accidental, or may be caused by certain vital phenomena simultaneously developed in some other manner, both materials are brought into connexion with each other, and thereby the germs rendered capable of development. Should these circumstances not come into operation, or should an interruption develop itself in their course, the generative materials mature notwithstanding, and are separated, although no germs capable of development result therefrom. Examples of this in the vegetable kingdom, and in the lower classes of animals, as well as in fishes, amphibia, and birds, are too well known to require mention here.

On the other hand, in reference to mammalia and man, the case stood quite different. With respect to them, the formation of a germ was quite universally regarded as the result of coition; that act, in their case, being considered not only to have the design of rendering the female generative matter capable of development, but also of altogether producing it for the first time (creating it, *erst hervorbringen*.)

This opinion was of course chiefly based upon ignorance of the existence of the female generative material, the ovum, previously to coition.

So stood the matter, when, after centuries of controversy, Von Baer, at length, in 1827, discovered the ovarian ovum of mammalia and man, and at the same time, in its unexpected minuteness, the cause of its long concealment. I have always felt astonished that this discovery, in a department of science which has interested mankind in all ages in so extraordinary a degree, did not excite greater and more universal attention. By some it has been received, by some denied, taken no cognizance of by others; and only embryologists, in the strictest sense of the word, have occupied themselves with it, and they indeed only in its relation to the development of the embryo, and not with reference to the theory of generation in particular. This theory, which had so often been erected upon an hypothetical ovum, was so firmly based as even to suppress for a time the necessity of investigation as to how it might harmonize with what was founded on fact, after that very matter of fact became known. Although the existence of the ovum previous to, and independently of, all coition, was proved, yet coition was still held to be the sole and necessary condition to the maturation and extrusion of an ovum from the ovary; and all other circumstances, however distinctly they might indicate the contrary, were considered only from that point of view.

I was myself so much influenced by this theory, as to be led blindly by it in the course of my previous researches on the development of mammalia. They were, it is true, directed more particularly to the development of the fecundated ovum; but the process of fecundation was an essential object of them, and as I availed myself of a knowledge of the ovum, I certainly succeeded

in rectifying and throwing light upon several points which my predecessors had remained unacquainted with. Yet still I was always biased by the opinion, that the passing out of the ovum from the ovary, the first condition therefore of its development, must have in some way or other a necessary relation to copulation. Like all my predecessors I sought only to ascertain at what period the ovum freed itself from the ovary after the first act of coition in animals, and what was the part performed at the same time by the seminal fluid. I was so fortunate, although in this track, as to decide several of the most important questions; I furnished proof, that the male fluid comes into material contact with the ovum, and found by indubitable observations that the seminal fluid penetrates through the uterus and fallopian tube up to the ovary. Accordingly, in the acceptance of the old doctrine, I laid down the proposition, that the fecundation of the ovum of mammalia takes place upon the ovary, and in various kinds of animals at various periods after copulation, within which periods the seminal fluid advances up to the ovary, and the ova are extruded from the ovary.

Meanwhile, from continued observations and researches, I have now arrived at the conviction, that although the facts upon which I based that proposition are still perfectly correct, yet that nevertheless it by no means comprehends even the law of the development of mammalia and man, but that this latter is more comprehensive, and completely accords with the law governing the generation of all organised beings. This law is as follows:—

“Both in mammalia and in man, the self-forming ova undergo, in the ovaries of the female individuals, a periodical maturation, quite independently of the influence of the male seminal fluid. At this period, which in animals is usually called ‘the heat,’ in the human female, ‘menstruation,’ these mature ova disengage themselves from the ovary, and are extruded. At such time, also, the sexual impulse manifests itself in the female animal only, more particularly in woman. If copulation take place, by the material influence of the semen upon the ovum, the fecundation of the latter results. If copulation do not take place, the ovum is nevertheless extruded from the ovary,

and enters the fallopian tube, but there proves abortive, (*zu grunde geht*.) The relations in respect to time in this matter may vary, although, as it appears, to a different, but yet definite extent in different animals. The seminal fluid may have sufficient time to reach the ovary before the ovum leaves it. The ovum may, however, have already quitted it, and the seminal fluid first come in contact with it in the fallopian tube. The influence of the semen must, however, always be exercised within the tube, in order to produce development of the ovum, which, indeed, first commences its evolution within that duct. But only at this season of the periodical maturation of the ova can coition have fecundation for its result.”

I do not consider it necessary here to adduce proof of every element comprised in this law, inasmuch as many of them stand as already settled and familiar truths; but I shall in the next place restrict myself especially to proving, that at the time of heat, the ova in mammalia quit the ovary, and reach the fallopian tube, whether copulation take place or not, and whether the semen be conducted to the ovum or not. Previously, however, I would add the following observations.

The changes in the female genital organs of mammalia at the time of heat, which demonstrate their periodically increased activity at that season, have been partially known a long time. I may, however, mention in addition, that Barry and I both have drawn attention to the changes in the ovum also which are observable at this period, which may, therefore, be regarded as signs of its maturity. They relate in the first place to its size. The most mature ova are at the same time always the largest, which fact meanwhile bears out the law already announced by Von Baer and Valentin, and confirmed by me, in reference to the individual parts of the ovum, and the Graafian vesicle, viz. that the contained parts are always relatively smaller than the containing, in proportion as the parts are more mature. The vitellus is most full and most dense, and contains most vitelline particles, in mature ova. The number of the larger fat globules contained in it, which varies much in different animals, appears to decrease; and on the contrary, that of the smaller vitelline gra-

nules to increase. The germinal vesicle which, in the immature, is situated more in the centre of the yolk, is, in the mature ovum, found quite at the circumference, and sometimes becomes visible there, as though placed in a notch of the yolk; I have seen this in dogs. It may even be wanting in perfectly mature ova, and according to some observations made in dogs, it seemed possible that the disappearance of the nucleus of the germinal cell taking place previous to that of the cell itself, denoted the complete maturity of the ovum. The most striking, and most easily recognisable, at the same time a sure sign of the full maturity of the ovum, in dogs and rabbits at least, is afforded by the change undergone by the cells of the so-called discus proligerus, round about the zona, which commence to extend themselves into fibres, and being placed upon the zona in this form give a radiated appearance to the entire ovum. Lastly, I can decidedly assert with respect to the dog, that the formation of the corpus luteum in the form of granulation-like excrescences (*den granulationen ähnliche Wucherungen* (from the inner surface of the Graafian vesicle, commences previous to the opening of the latter, and the extrusion of the ovum, and may, therefore, also be considered as a sign of perfect maturity. These statements may I hope serve to guide others, in deciding the question in any given instance, as to whether they have mature ova, or such as are advancing to maturity, before them.

A repetition of the experiments made by Nuck, Haighton, Cruikshank, Grossmeyer, Blundell, and Hausmann, first, however, convinced me, that it is not the influence of the semen which causes the extrusion of the matured ova from the ovary: it may not be altogether unnecessary to quote and critically examine the results of those experiments in the next place.

Nuck (*Adenographia curiosa*, p. 69, op. omn. Lugd. Bat. 1773) put a ligature round the left cornu of the uterus of a bitch three days after coitus, and found, twenty-one days after, two ova in the portion of the uterus above the ligature, but none below it. Although this result is rendered very dubious by his addition, "*foetus jam consumptos et in materiam pene purulentam conversos fuisse*," although it is further certain

that on the 21st day after the first coitus the embryo of the dog is not yet formed, or scarcely in its first rudiments, yet still, if received to be correct, there is nothing in it to excite astonishment. The semen of the dog penetrates in copulation at once up into the point of the uterus; long before the third day after coitus it has entered the fallopian tubes; the ova also have already left the ovary and become fecundated, so that the tying of the uterus would only prevent the sinking down of the ova below the point of ligature: all the rest is readily explainable.

Haighton (*Reil's Archiv*. III. p. 46), divided the fallopian tube in a great many rabbits, both with and without a loss of substance, and sometimes on one, sometimes on both sides. In by far the greater number of instances he remarked a complete loss of sexual impulse afterwards: (probably because the vessels leading to the ovaries were also divided, whereby the maturation and development of the ova, and with that also "the heat" and sexual impulse, were arrested). When even the act of copulation was permitted by some of them, it proved ineffectual, and the ovaries had in most instances degenerated. Coitus and conception, however, took place in three instances in which he had divided the fallopian tube on one side only. He thence concludes, that the ovaries might become affected by the stimulus of impregnation, without contact with the seminal fluid, whilst he should have been content to rest on the assertion that the ova quit the ovary, even when the semen cannot reach the latter. In one rabbit, in which he had divided the fallopian tube on one side six hours after coition, he subsequently found corpora lutea on both sides, but ova on the uninjured side only. This may also be easily explained; indeed, in two ways. In the first place, Barry and I have seen the semen in the rabbit upon the ovary within nine and ten hours after coition. It is, therefore, quite possible that within six hours it might have already passed the point of ligature. The ova consequently might have been fecundated, and a tubal gestation have been produced. If, however, this view be not received, then, in the second place, the mature ova may have been extruded on that side on which the semen could not reach them, but there proved

abortive because unfecundated, while at the same time corpora lutea were formed just as well as on the opposite side.

The experiments of Grassmeyer (*De Fecundatione et Conceptione Human.* Dissert. Götting. 1789, p. 48) are less to be relied on, and no conclusion can be drawn from them. He placed a ligature round the fallopian tube, or the uterus, in fourteen rabbits; after which simple operation only two survived,—a proof that the operation was badly conducted. One of these two animals, in which he had tied the fallopian tube, was with young at the time of the operation, and in consequence aborted. Four days afterwards sexual impulse was ardently exhibited, and the act of coition consummated. On killing the animal fourteen days later, he found the cornua of the uterus in some parts somewhat swollen, but no ovum and embryo, and likewise nothing worthy of remark in the ovaries. In the abdominal cavity, however, he found hydatids, which he looked upon as something very extraordinary, although Blumenbach pointed them out to him as being such. In the other rabbit the fallopian tube was also tied. It is represented as having become impregnated twenty-one days afterwards, although Grassmeyer did not see the act of coition; and nine days subsequently found no change whatever, either in the ovaries or in the uterus.

Cruikshank also made an experiment bearing on this point, but which was without result. He placed a ligature around the left fallopian tube of a rabbit, close to the uterus, a day after coitus. After fourteen days he found the uterus of the right side without embryo, although the placenta was perceptible, and had retrograded in the process of formation; the same was the case with the ovary. On the left side was no sign of fecundation in the uterus, no placenta, the tube very wide and soft, the ovary twice as large as that of the other side, red, and covered with coagulable lymph. In the fallopian tube was seen an hydatid, which contained a clear fluid, but no embryo. In addition to this there were general traces of peritonitis and exudation in the abdominal cavity. In this instance, according to my experience, the fecundation and extrusion of the ova must have taken place within twenty-four

hours. It appears, however, that the operation had excited violent inflammation, and that from this cause the ova on both sides had aborted, though, on the right side, development had advanced somewhat farther (*Philosophical Trans.* 1797, vol. i. Experiments 11 and 16.)

Blundell (*Medico-Chir. Trans.* vol. x. p. 264, 1819; *Meckel's Archiv.* v. p. 422; *Principles and Practice of Obstetrics*, Lond. 1824, p. 60) found, after division of one cornu of the uterus in rabbits, prior to and after coition, ova only in the uninjured cornu, but corpora lutea, which were not distinguishable from each other, on both sides. After division of the vagina, ova were never found in the uterus, but still corpora lutea in the ovaries. At the same time he remarked an insatiable desire for copulation after these operations.

Lastly, Hausmann (*Ueber die Zeugung des wahren weiblichen Eies*, p. 93), in his 53d experiment, on a sow, in which he had removed the fimbriae of the fallopian tubes from contact with the ovaries, saw no fecundation, but still the development of corpora lutea followed. A second experiment (54), in which he did the same with only one ovary, is not to be relied upon.

The following are the experiments which I have myself made in reference to this subject:—

On the 29th of January, 1842, at half-past 8 A.M., I permitted a rabbit to receive the male; the spermatozoa were present in the vagina in large quantity. At half-past 2 P.M., after six hours therefore, I opened the animal, and cut out its right ovary and fallopian tube; in doing which, I found that this was one of those rabbits from which I had removed the uterus in the previous summer. The ovary and fallopian tube, notwithstanding, exhibited all the signs of "the heat," were injected with blood and turgid; several Graafian vesicles were much swollen. The ciliary motion on the epithelium of the tube was very active; the latter, however, naturally enough, contained no spermatozoa. I proceeded to examine the four largest and most swollen Graafian vesicles, and found them still closed, with an ovum in each one. The cells of the *membrana granulosa* were much developed, and those of the *discus proligerus* extended into fibres, as I have always observed to be the case in

those ova which are designed for the immediate act of fecundation. The yolk of one ovum had a spotted appearance, which was not the case with the others. A germinal vesicle was no longer discoverable in any of these four ova, in spite of the greatest care and attention. The ovum from the largest Graafian vesicle measured in the diameter of the discus 0,0100 (Paris inch); of the zona, 0,0060; of the yolk, 0,0045. The zona itself was 0,0006 thick.

I killed this animal at half-past 6 P.M., ten hours therefore after coitus; at which period, in other instances, the ova have always left the ovary. The uterus of the other side had also been removed, and the fallopian tube and the ovary had become adherent. But notwithstanding this, in the latter were several Graafian vesicles, much swollen, which, however, still contained ova; and in three of them the cells of the discus exhibited their spindle-like metamorphosis even yet. The yolk of each of these was spotted very dark, which appearance, however, was not produced by any formation of cells. It rather appeared to me as though a retrograde metamorphosis were already going on in the yolk, which was probably caused by the general condition of the ovary. Some other Graafian vesicles, for instance, which were not much swollen, contained some of those ova with a darkly spotted yolk, in which both the cells of the membrana granulosa, and of the discus, were changed into dark granules. In the ova of this side, also, I could no longer find germinal vesicles. Neither of the ovaries exhibited any corpora lutea.

On the 22d April, 1841, I cut out both uteri, leaving the ovaries and tubes, from a rabbit which was eight days gone with young. The animal soon recovered perfectly, and I therefore, on the 22d of June, placed it again with the male. The sexual desire of the doe was so strong, that it not only permitted coitus immediately, but during the intervals imitated the act upon the other does. Four days afterwards I killed it. I found on the left ovary three, and on the right five, recent corpora lutea, and in addition a Graafian vesicle filled with black coagulated blood. Satisfied with this result, I unfortunately only examined the tube with reference to ciliary motion,

which it exhibited very strong and perfect.

In the summer of 1841 I had excised the uterus of the right side from another rabbit, leaving the fallopian tube and ovary. This animal subsequently exhibited strong signs of being "at heat," drove the other does about, mounted on their backs, and so on. Notwithstanding this, so often as I placed it with the buck, it would not permit the act of copulation to be effected: such was the case on the 15th and 16th of May, 1842. I had quite forgotten the former operation upon it. I allowed it to remain with the male unnoticed from the 17th to the 21st of May, and on the latter day made use of it for another experiment.

I now found to my surprise the traces of the operation; and, in addition, that coitus had notwithstanding taken place.

In the upper portion of the left uterus I found an ovum, which attracted notice from its slightly swollen and transparent condition. The stage of its development corresponded to that usually observed in the ova of rabbits about the 9th day. The ovary exhibited a corpus luteum. The right uterus was wanting, and the lower end of the tube was adherent to the lower portion of the excised uterus, and both were closed. Between them was a thick cheesy mass, which, when examined under the microscope, exhibited pus globules, and within which the ligatures made use of in the operation were inclosed. The ovary presented four corpora lutea, just as perfectly developed as that of the left side. It occurred to me to examine the fallopian tube, and I unexpectedly found the four ova in the centre of it. They had manifestly advanced a certain extent in their development, had then remained stationary, and were now on the point of aborting. The discus proligerus had disappeared, and in its place a slight layer of albumen had formed around the zona; the latter was somewhat swollen. The vitellus did not completely fill the zona, and clearly shewed signs of resorption. It was irregular, very pale, granular, and small. Some darker granules were remarkable in the yolk of one of the ova.

On the 19th and 20th of January, 1843, I removed, in four portions, both the uteri (with the exception, as will afterwards appear, of a small por-

tion at either end of each) from a Pomeranian bitch, which had been lined three weeks previously; they contained five ova. The animal bore the operation very well; and as my intention was to let it live, I brought all the ligatures out at the external wound, which was closed by suture. It was soon quite well, the ligatures came away, and the external wound closed. I then took the animal to live in the house, where it became lively to a remarkable degree, and grew large and fat. A certain sensibility of the belly on pressure, which had existed, also disappeared, and in a short time not the slightest trace of its having suffered any thing could be remarked.

On Sunday, the 14th May of the same year, I first observed the dogs begin to follow her. She bit them off, however, in a playful manner, and continued very lively until Wednesday, when the external genital organs were much swollen, and secreted blood in a considerable quantity. On this day the animal became dull, and ate nothing; but on the next it became again very cheerful, and the dogs were still more zealous in following her about. She would not, however, permit the act of coition, until on the evening of the 20th, when it took place in my presence, and continued during three-quarters of an hour. From that period she permitted herself to be lined daily by different dogs, through the whole following week until the 28th. On the 29th also she was willing, but the male did not accomplish the act. I was very undecided as to the time at which I should examine the animal. I was convinced that the ova would have separated from the ovaries, and have entered the fallopian tubes. I further expected that they would abort there; but I much wished to wait until the period when, in the regular course of things, a division of the vitellus should have commenced, in order that I might see whether perhaps some trace of such division might not make its appearance, as is often the case in the unfecundated ova of frogs and fishes. My reason for allowing the animal to live so long was, because this division first commences in the lower portion of the tube, and bitches generally permit themselves to be lined until the period when the ova are on the point of entering the uterus. As, however, that

inclination had continued in this case already eight days, I was in fear for the ova, and had the animal killed at ten o'clock on the 29th.

On opening the abdomen, the traces of the previous excision of the uterus were on the whole but slightly marked. The bladder adhered anteriorly to the cicatrix in the abdominal parietes by a sort of mesentery; all the other organs were free from such adhesions. The great omentum was completely united with the remains of the uterus and its mesentery, as also with the investing membrane of the left ovary, and altogether enveloped in a peculiarly complete manner the entire alimentary canal; the latter, however, was throughout quite freely moveable. With regard to the organs of generation, the vagina, the os uteri, and body of the uterus, were perfectly normal in condition. There remained attached to the body of the organ, on the right side, about an inch, and on the left half an inch, of the cornu of the uterus, which likewise were perfectly normal, and both completely closed superiorly. On the right side a callus-like portion of cicatrix-material (*Narbensubstanz*), two lines in length, connected, in direct continuation, the lower portion of that cornu of the uterus to the upper portion of the cornu, more than an inch in length, and having the ovary and fallopian tube attached to it, both of which were quite normal, and had acquired no adhesions. The left side presented a larger portion of this cicatrix-material, and between that substance and the omentum the most complete adhesion had been formed: with that material the upper portion of the left cornu, with ovary and tube attached, was continuous as on the other side; the upper portion of this cornu, however, was somewhat distended, and contained pus. The ovary and tube were quite normal.

My first investigation was with respect to the seminal fluid; and I found spermatozoa in the body and both the lower portions of the two horns of the uterus; on the whole, however, but few. They were no longer in motion; which fact, as well as their scarcity, astonished me in some degree, as the bitch had been lined only the day previous. There was not the slightest trace of spermatozoa to be found in the upper portion of the right uterus, after

the most minute search; the pus on the left side made the examination both impossible and unnecessary.

The ovary of the right side exhibited two, and that of the left four, quite perfectly developed, fresh and large corpora lutea. They did not in any point differ from the corpora lutea of other bitches on the eighth day after coitus: they were quite as large, quite as much injected and flesh-coloured in appearance; they presented in their interior precisely the same structure and radiated texture, and contained also a small central cavity, filled with a transparent gelatinous mass. The surfaces of most of them were smooth, only one exhibiting a kind of opening; such an opening is, however, rarely met with in bitches on the eighth day, and is in most instances already closed, without even a trace of its appearance. Lastly, both ovaries still contained most distinctly the five corpora lutea of the last gestation in January, in the form of lenticular yellow masses.

I next examined, in the most careful manner possible, both fallopian tubes, and the upper portion of the right uterus, for the ova. Unfortunately, however, I found none. I do not think that I could have overlooked them, even although they might have already undergone an essential change in appearance. On the other hand, I am nevertheless convinced, from the condition of the corpora lutea, and from my experience with rabbits, that the ova had already left the ovary, and had entered the tube, perhaps even the uterus, and had there aborted for want of fecundation. I ought to have made the investigation earlier, on the third or fourth day, and not have left it until the ninth.

On the 14th August, 1842, I opened the abdomen of a bitch, supposing her to be with young, but found such was not the case. I then put a strong ligature around the left uterus, at about its middle, cut off the ends of the ligature, and the animal recovered.

Monday, the 4th of January, 1843, at nine o'clock in the morning, this same bitch was lined, and again on the following day, by two dogs.

Friday, the 13th January, I had her killed. In the middle of the left uterus, at the part where the ligature was applied, there was a swelling of the size of a walnut, to which the omentum was

firmly adherent: a small portion of the organ above the ligature retained its normal diameter, but the upper end of it appeared very much stretched, and expanded into a fluctuating sac, almost as large as a hen's egg, into which the fallopian tube conducted. The right ovary presented three corpora lutea, the left four quite as perfectly formed as the others. I first examined the right uterus, and found the three ova, one about the middle, the second about an inch from it, and the third above, in the point of the uterus. They presented that state of development at which the germinal membrane is just commencing to form itself from the vitelline globules, and which I will describe more precisely in another place. On the left side I unfortunately examined the fallopian tube in the most careful manner in vain—I could find no ova. Meanwhile, since they had certainly been extruded, as the four corpora lutea proved, I think that they had passed through the fallopian tube, and had reached the sac-like expansion of the uterus. This, however, was filled with a stinking green pus (the swelling at the point of ligature also contained some), necessarily rendering all search after the ova impossible.

[To be continued.]

ANALYSES AND NOTICES OF BOOKS.

“L'auteur se tue à allonger ce que le lecteur se tue à abréger.”—D'ALEMBERT.

A Treatise on Poisons in relation to Medical Jurisprudence, Physiology, and the Practice of Physic. By ROBERT CHRISTISON, M.D. Professor of Materia Medica, &c. in the University of Edinburgh. 4th Edition, 1845, 8vo. pp. 986.

WE have the pleasure of announcing to our readers the appearance of the fourth edition of this valuable treatise. Its character is so well established as a standard work in the medical literature of this country, that it needs no encomium from us. For the benefit of those of our readers, however, who feel an interest in the progress of toxicology, it may be advisable to give a cursory notice of some of the important additions which have been made by the distinguished author.

It is now fifteen years since the first

edition of this work appeared, and it is only doing justice to it to assert, that it has uniformly maintained its popularity as a work for reference and practice. It has for a long period been in the hands of barristers, who have not failed to make good use of it in the cross-examination of medical witnesses; and we believe that there are now few medical men who venture into the witness-box on a trial for poisoning without having at least consulted it respecting some point on which their evidence is likely to be impugned.

One circumstance which we admire in Dr. Christison as an author is, that he is not an advocate of "finality" in reference to toxicology. Many changes have taken place in the science, many old views have been exploded, and new doctrines introduced, since the appearance of his first edition. But although some of these doctrines have not coincided with his original opinions, he has not hesitated to adopt them where they have been founded on good and sufficient reasons; nor has he hesitated to acknowledge, in candid language, the alteration which has taken place in his opinions. Another circumstance to admire in him is, his fairness as a writer in acknowledging all that he has derived from other sources. His example shows, that it is no disgrace to a man to borrow largely from his contemporaries. His references are numerous, and for a large number of the facts contained in his volume he acknowledges his obligations to others. Indeed, that individual can have but a very slight notion of the subject of toxicology who supposes that any writer can compose a work on this science from facts falling within the range of his own experience and observation. He would, indeed, be a fortunate person who, from his own practice alone, could bring together all the facts necessary for elucidating the medico-legal history of any one poison.

The matter which has been added to this work since its first appearance may be judged of from the fact that this edition contains nearly three hundred pages more than the first—it now extends to nearly one thousand pages. The greatest additions appear to have been made to the sections on arsenic, mercury, lead, and some other irritant poisons; but the whole work has undergone revision. We can trace

the revising hand of the author from the first chapter on the "physiological action of poisons."

Dr. Christison, after having stated that toxicologists of late years have been disposed to regard the action of poisons as depending exclusively on absorption, and that numerous experiments have certainly shown that this process is carried on much more rapidly than was formerly believed, proceeds to examine the results obtained by Mr. Blake. This gentleman, it must be remarked, denies that poisons act by sympathy, and alleges that all their effects are due to absorption. In some of his experiments he succeeded in showing that certain substances susceptible of analysis had been carried into the blood in the course of a few seconds. At one time toxicologists were all advocates of "absorption," then "sympathy," and now the current is again strongly setting in favour of "absorption." As it has thus become fashionable to pass from one extreme to another, we shall quote the plain common-sense judgment which Dr. Christison passes on Mr. Blake's views.

"For example," he says, "they (Mr. Blake's experiments) do not shake the validity of these observations, in which it appeared that an interval, inappreciable or barely appreciable, elapsed between the application and action of hydrocyanic acid and of conia. Mr. Blake, indeed, denies the accuracy of these observations, insisting that in those he made himself with the most potent poisons, he never failed to witness, before the poison began to act, an interval considerably longer than what had been observed by others, and longer also than what he had found sufficient for the blood to complete the round of circulation; that, for example, the woorari poison, injected into the femoral or jugular vein, did not begin to act for twenty seconds, conia and tobacco for fifteen seconds, and extract of nux vomica for twelve seconds, and that hydrocyanic acid dropped on the tongue did not act for eleven seconds if the animal was allowed to inhale its vapour, and not for sixteen seconds if direct access to the lungs was prevented by making the animal breathe through a tube in the wind-pipe. But Mr. Blake cannot rid himself thus summarily of the positive facts which stand in his way. Duly

weighed, the balance of testimony is in favour of those whose accuracy he impugns. For, in the first place, they had not a theory like him to build up with their results, but were observing, most of them at least, the simple fact of celerity of action. Then their result is an affirmative or positive statement; his merely a negative one: they may perfectly well have observed what he was not so fortunate as to witness. And, lastly, it is not unreasonable to claim for Sir B. Brodie, Dr. Freer, Mr. Macaulay, and Mr. Taylor, all of them practitioners of experience, the faculty of noting time as accurately as Mr. Blake himself. As for my own observations, I feel confident they could not have been made more carefully, and that I had at the moment no preconceived views which the results upheld, but, if any thing, rather the reverse."—P. 10.

Dr. Christison considers that the question is still left unsettled, and that it is almost beyond the reach of experiment.

At p. 70 we find detailed an interesting case of poisoning by monkshood, which occurred lately to Dr. Geoghegan, of Dublin. It involves the question as to how far a medical jurist is justified in pronouncing an opinion on death from poisoning when no poison can be discovered either in the food or body of the deceased. It is a favourite doctrine with some, that the only proof of poisoning which a court of law ought to receive is the production of the poison itself. It might be just as well laid down that no conviction for death from criminal wounding should take place without the production of the weapon. If such a rule were adopted, it would be very convenient for one class of murderers, who might select poisons not susceptible of chemical analysis, and set the law at defiance. Dr. Geoghegan did not hesitate to give an opinion against the accused in this important case, and the correctness of this opinion was afterwards confirmed by the confession of the woman before execution. The poison which she used was the powdered root of monkshood. This case is well worthy of attention, as it shows clearly that chemical evidence is not always necessary to the proof of poisoning, nor to a conviction for murder by poison. As Dr. Christison remarks—"great caution must be

observed in applying the principle here inculcated. But the opposite doctrine, that no charge of poisoning can be established without the discovery of poison in the body or in the evacuations, appears to me a great error, though upheld by no mean authority. Under that doctrine few criminals would be brought to justice were they to resort to the variety of vegetable poisons, which, in certain seasons, are within the reach of every one."—P. 72.

The tests for the various poisons have been carefully revised, but we find nothing requiring particular comment. In respect to arsenic, it has been lately the custom to depreciate the reduction test; but we quite agree with the author when he states, "that the appearances exhibited by a well-formed arsenical crust, even in the minute quantity of the 300th part of a grain, are imitated by no substance in nature, which can be sublimed by the process for the reduction of arsenic." (p. 260.)

There is much sense in the following remarks:—

"After all that has been written on the old and newer processes for detecting arsenic, I must nevertheless avow my conviction, that, for solid arsenic, no test is, for medico-legal purposes, at once so satisfactory, convenient, and delicate, as the test of reduction, especially with the addition of the supplementary test of oxidation. That other methods are still more delicate, may be readily granted. But where the suspected substance is in the solid form, what possible occasion can there be for a method more delicate than one which will detect a 300th part of a grain? A method ten times less so, would meet every case in actual practice. A variety of supplementary tests have been proposed; but they are all greatly inferior in facility or conclusiveness, or both, to the process of oxidation, and ought therefore to be expelled from medico-legal practice,—not even excepting the alliaceous odour of metallic arsenic in subliming, a character the fallaciousness of which was long ago pointed out by myself as well as others, and to which a preposterous importance has been attached in some late inquiries." (p. 261.)

In speaking of Renisch's process, Dr. Christison recommends that the metallic copper should not be introduced into the diluted muriatic acid until this

has nearly reached the boiling point, because the metal is otherwise apt to become tarnished, although no arsenic be present. In respect to the detection of arsenic in the tissues of the body, he recommends the process pursued by MM. Danger and Flandin; that is, carbonization by sulphuric acid, in preference to incineration with nitre, as recommended by Orfila. The chapter on arsenic is of itself a perfect treatise, embracing all that is practical and useful to the medical jurist in relation to this poison.

The author's recent researches on the action of various kinds of water on lead are incorporated in the chapter devoted to that metal, and form a useful addition to the subject of medical police.

That Dr. Christison has not lost sight of the latest additions to toxicology, is proved by his reference to the new antidote for prussic acid, recommended a few months since by the Messrs. Smith, of Edinburgh: we allude to the mixed oxides of iron, which have the property of converting the poison to insoluble Prussian blue. In addition to this treatment, he recommends cold affusion to the head and spine, venesection at the jugular vein, and the inhalation of diluted ammonia and chlorine.

Many additions have been made to the chapter on poisonous gases, especially in relation to carbonic acid; and in the chapters on the narcotico-irritants, we notice among the additions, a full account of poisoning by labournum and the oleaginous products of combustion, including Dippel's oil, the oils of turpentine and of tar.

The subject of compound poisoning, which concludes the volume, is shortly discussed.

We are glad to perceive that, in treating the tests for poisons, the author prefers old terms and perspicuity of language to the pedantic allusions of modern chemistry, that is, the display of symbols and formulæ as substitutes for description. Dr. Christison has so written, that he may be understood both by the lawyer and the medical practitioner; his descriptions are, besides, equally intelligible to those who studied chemistry fifteen and twenty years ago, and the modern race of students, who are now taught to speak and think in symbols and

algebraic formulæ,—and to decide chemical decompositions by equations instead of by actual experiment, thereby losing the substance for the shadow. Some hypercritics may object to the author retaining in this, the year 1845, the old fashioned names of hydrochlorate of lime, ferrocyanate of potash, and carbonate of ammonia, instead of chloride of calcium, ferrocyanide of potassium, and sesquicarbonate of the oxide of ammonium. For the reasons already stated, we do not object to this old nomenclature. With regard to the chloride doctrine, the theory of double decomposition between the hydracid and base is doubtless more simple; but the simplicity of a theory is not necessarily a sure guarantee of its truth. Hydrochloric acid combines directly with morphia: no one has hitherto pretended that the hydrogen of the acid combines with one equivalent of oxygen of the alkaloid; yet why not assume this for the sake of simplicity and uniformity? So ferrocyanide of potassium may really be ferrocyanate of potash. Not many years ago its congener, Prussian blue, was regarded as ferrocyanide of iron; it is now considered as a ferrocyanate of the peroxide; for it cannot lose the elements of water without decomposition. Again, it is somewhat inconsistent to maintain the existence of a sesquicarbonate of oxide of ammonium, when it is utterly impossible that there can be a simple carbonate of that alleged oxide; since the simple carbonate is immediately decomposed by water. Thus, then, carbonic acid may combine in single equivalents with the alkaline base, ammonia; but in any other proportion, carbonic acid is assumed to determine the transference of the hydrogen of one equivalent of water to the ammonia, forming ammonium, and producing an oxide with the remaining equivalent of oxygen! Such are the inconsistencies into which those are led, who are desirous of maintaining, at all costs, a favourite theory.

We have been drawn into this digression, because the retention of the old nomenclature might be objected to as a defect in the present edition: if we remember rightly, this objection was actually made to the earlier editions of the treatise. We do not hesitate to say, that Dr. Christison has shewn both judgment and good sense

in retaining it; and we shall now conclude by observing, that the fourth edition is well calculated to uphold the high reputation of its author.

Guy's Hospital Reports. Second Series.
No. IV. Oct. 1844.

(Second Analytical Notice.)

MR. J. P. FRANCE, the Assistant-Surgeon to the ophthalmic department of Guy's Hospital, furnishes a detailed account of eighteen cases of iritis, for the purpose of illustrating points in the pathology and treatment of that complaint. In fifteen of these sight was restored, two applied too late to receive the full benefit of medicine, and in the remaining one the wretched intemperance of the patient precluded all hope of success. As these cases were not selected for their peculiar success, Mr. France expresses his belief that there is no disease of so serious and disorganizing a character, when allowed to proceed unchecked, which is so completely and unequivocally amenable to early and well directed remedial treatment as this. He adopts the threefold division of iritis, which has been founded upon constitutional grounds, viz. the rheumatic or arthritic, the syphilitic, and the simple kinds, as the correct one; and, in truth, the paper is principally written to illustrate and vindicate the separation of the syphilitic from the arthritic variety. With reference to the comparative frequency of the three, he observes, that the simple, as a primary affection, independent of wound or injury, is very rare, while "persons labouring under syphilis form about one-half, perhaps more, of the whole number of cases who present themselves the subject of this disease." In the majority of cases of arthritic iritis, according to Mr. France, the lining of the anterior chamber and serous covering of the iris, in common with the sclerotic, are the principal seat of the disease, herein closely agreeing "with the recognised disposition of rheumatic inflammation in other regions to affect free membranous surfaces (as those of the synovial cavities and pericardium), and then give rise to abundant effusion, which is unknown as an accompaniment of rheumatism of fibrous and muscular tissue. Thus the large participation of the aqueous membrane in the inflammation called arthritic iritis, is mani-

festated by copious effusion into its cavity, generally fibrinous, but sometimes serous; while the affection of the muscular structure is inferred only from its proximity, the contracted pupil, aching pain, and especially the exacerbation of that pain occasionally produced by the application of belladonna. Syphilitic iritis, on the contrary, is for the most part essentially an inflammation of the parenchymatous structure; and to this circumstance the disease owes its peculiar character of producing tumefaction or thickening; and in proportion as it departs from this type, are the chief marks deemed diagnostic either ill developed or absent." The tubercles generally regarded as attachments of lymph to the free surface of the iris, are explained as "irregularities of the surface of the iris, due to its proper substance being at certain parts swollen and infiltrated." At first these swollen portions barely rise above the surrounding level; but owing to the loose and distensible texture of the iris any part may become elevated, so as to constitute a tubercle projecting high above the general plane, and sometimes even overlapping its own base." The following passage we give in the exact words of the author.

"Simultaneously with local tumefaction, a rusty reddish-brown colour is most frequently assumed at the same points, especially in irides naturally hazel or brown; and it arises from one or more vessels distended with red blood ramifying in the aqueous membrane over those inflamed points. Not quite so soon as the colour appears is the source whence it springs perceptible by the eye; a certain degree of inflammatory excitement must first be attained; in other words, the distension and dilatation of those minute vessels must reach a certain pitch before they can be recognized, even with artificial aids. In moderately severe cases this soon takes place; and if then the eye be inspected closely in a good light, and with the assistance of a powerful lens (the cornea and aqueous membrane being clear, and photophobia not great) sometimes only one or two, but occasionally a complete network of vessels becomes manifest, ramifying over the swollen parts of the iris, and evidently imparting to them the rusty red colour they exhibit." (This observation the author believes

to be original). "The appearances I now describe may be detected in so large a proportion of cases where this dusky colour is developed, that I cannot doubt that the same hue arises from the same causes when from the mildness of the attack, and the consequent slighter vascular distension, the individual vessels elude observation, or intolerance of light forbids that close examination, and exposure of the globe which are necessary in most cases for their recognition. In some rare cases these vessels are so gorged, crossing over a well-grown tubercle, that the naked eye can scarcely fail to notice them: in such instances they have in fact been observed, and been ascribed to organization having taken place in lymph thrown out into the anterior chamber from the free surface of the iris. To this hypothesis, though sanctioned by very high authority, I must object that it is at variance with the results of early and patient investigation, and with analogy; for fibrin effused during an attack of peritonitis or pleuritis, or even rheumatic iritis, is not endowed with appreciable vascularity until after the lapse of a lengthened period; not, in short, until all active disease has subsided; and lastly, it is opposed to all experience that a structure once so fully organized should disappear and be removed in a few days by the influence of any remedy, even so powerful a one as mercury. It is on the other hand worthy of remark, in connection with this part of the subject, that in other instances one grand character of the action of the true syphilitic virus seems to be the development of disease, whether marked by ulceration or effusion in the cellular tissue or parenchyma of organs—examples of which may be adduced in the so-called Hunterian chancre, surrounded by abundant but circumscribed fibrinous interstitial effusion; in nodes; in the tuberculated forms of syphilitic cutaneous eruption; in the disease known as chronic carbuncle, or, *par excellence*, cellular membranous ulcer (ordinarily of syphilitic origin); syphilitic ulcers of the throat, again, are partly recognized by their extending into the substance of the tonsil, &c."

Mr. T. Wilkinson King publishes the description of a specimen of partial fracture of the neck of the thigh bone, and also of the nutritive artery of the epi-

physial bone, forming the head of the femur, illustrated by two plates, with the view of directing attention to the influence which the integrity or laceration of this vessel may exert over the *rezata questio* of bony union of fractures of this part. The following is his description. "The artery which supplies the head of the femur, while it constitutes an epiphysis, is persistent through life. It is a large terminal branch of the internal circumflex artery, which enters a foramen a little behind and below the highest point of the neck of the femur. After this it curves over the denser layer of cancelli left by the union of the epiphysis to the shaft, directing its course beyond the insertion of the round ligament, to which, I doubt not, it furnishes nourishment. Now it is remarkable that this vessel occupies the situation of the greatest immunity from violence; and that if only a little periosteum about it escape division, when complete fracture occurs, it may be left entire to sustain that which I think could hardly live without it. This consideration seems corroborated by all the examples I have examined of ligamentous union after fracture of this part. Whether there be a reunion by solid ligament, by a few scattered bands, or by a kind of capsule and cell (all rare events), I find the course of this vessel uninterrupted."

The next paper is supplementary to the very valuable communication on Paracentesis Thoracis, by Dr. Hughes, and Mr. Cock, of which we formerly gave such an extended notice. It contains an account, in detail, of three cases in which the operation has been performed since the former paper was written, and which, with two cases then inadvertently omitted, have been added to the tabular view of twenty cases there appended. "Of the twenty-five cases," Dr. Hughes observes, "in which paracentesis thoracis was once, or several times performed, thirteen may be fairly stated to have recovered, so far as regards the effusion into the pleural cavity. Two may be justly mentioned as having at least partially recovered. One of these has, after seven years, a fistulous opening into the pleura; and the other has still some, though comparatively a very small quantity of fluid in the right pleura;

but feels so much better as to be actually in search of employment in his profession. Ten have *ultimately* died of other diseases, generally connected with that for which the operation was performed, but entirely independent of its performance. Of these ten cases ultimately fatal, six have died of phthisis; one of gangrenous pulmonary abscess of the opposite side; one after three months of chronic pneumonia; one, rather suddenly, with hydrothorax in the other pleura; and one, a case of pneumo-thorax with effusion (in which the operation was performed simply with the hope of affording temporary relief) of pneumonia and pericarditis."

MEDICAL GAZETTE.

Friday, January 3, 1845.

"Licet omnibus, licet etiam mihi, dignitatem Artis Medicæ tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

ADVANTAGES

OF A

WELL-CONSTITUTED COUNCIL OF HEALTH AND EDUCATION.

THE past year has been distinguished as one of incessant turmoil and agitation in the medical world—we should fain hope that the present may be one of peace and quietness. The art of medicine has been emphatically styled a domestic art, and so it is in point of fact. Accordingly, all open manifestations of strife and dissension must infallibly tend to lower its professors in general estimation, and to impair their influence and usefulness. The public naturally feel that the sick chamber will suffer neglect when much time and attention are devoted to meetings of associations and the like.

We have strenuously advocated the importance and necessity of great alterations as regards the medical polity of our fatherland, and have ventured to promulge a scheme of reform which we

are confident will meet the approbation of all parties.

The welfare of a people is the supreme law. It therefore behoves a minister of the crown, in all questions touching the health and lives of Her Majesty's lieges, to see that such legislative enactments are introduced as shall conduce to the universal good. Nor do we despair of this being the event. Indeed, we have no hesitation in declaring our firm belief that a Council of Health and Education, appointed by the Home Secretary of State, independently of all corporate bodies connected with the science and practice of medicine, in each and every one of its departments, would be fraught with signal advantages, not only to the members of the healing art, but to the community at large. It will, of course, be in the province of the minister, or of his Council, to assign a curriculum, and that curriculum, we have no doubt, will be carefully adapted to the exigencies of the times. The same sound discretion and judgment will be exercised in selecting competent examiners as is uniformly displayed in the choice of the officers of the law or the dignitaries of the church. On this head we are inclined to augur most favourably.

The practitioner armed with the state license may pursue his vocation where he will and as he will. He may adopt a general line of practice, or present himself for the Fellowship of the College of Surgeons; or, having obtained a degree at some University, eventually become a Fellow of the College of Physicians.

We repudiate all authority based solely upon adventitious distinctions among well-educated and industrious men. We look upon our brethren as offsets from one common trunk. We moreover maintain that as there is but one law for rich and poor, so ought

there to be virtually but one license throughout the realm for every practitioner of physie, be his sphere of activity among the affluent and high-born, or among the lowly and indigent. The highest of all authority proclaims that "the poor shall never cease out of the land;" and if it be the sacred duty of rulers to ordain some adequate provision for their spiritual and temporal wants, it is a part of that duty to see that their infirmities of body and mind shall be ministered to by persons of warranted skill and experience. We anticipate much benefit from such a system of things. So far from degrading, it will tend to elevate the medical man in the social scale. It will raise him from the somewhat equivocal position he now holds, to one of unquestioned respectability.

Again: the paternal care thus manifested by those in authority, will, we think, dispose materially to abate the prevailing disaffection of the labouring classes. It cannot fail to be a matter of satisfaction and comfort to the humble artizan, to know, that in the languishing hours of sickness and of pain, he can seek for advice and relief at a source equally efficient with the first person in the land; nay, that the very individual to whom he applies possesses the same qualification, and derives it indirectly from the crown.

We conceive the claims of the general practitioners are entitled to paramount consideration; for them as a body we entertain the utmost respect; we view them as constituting the largest, and, as regards the public, by far the most important branch of our profession; and we boldly assert, that any measure which would tend to deteriorate their education, and to degrade their station in society, would be productive of most baleful consequences. The community would be inundated with a flood of half-educated and

skillless individuals of the "baser sort"—pettifogging traffickers, reckless of human life, swayed by no other consideration save that of sordid gain. Physicians and surgeons would, ere long, sink to the vulgar level of their brethren in certain countries of Continental Europe. Emolument would decline, and, at the same time, all incentive to the pursuit of knowledge and distinction, until none of respectability would be found willing to enter a *craft* so thoroughly debased. Such a consummation, however, we are sure can never arrive. The British senate will never give its sanction to any act capable of inducing such pernicious changes.

DANCING OVER THE DEAD.

WE have been long familiar with the "Dance of Death," but never knew that dancing over the dead had been practised in a civilised land, until our attention was pointed to the fact by a printed paper of Mr. Walker, the unwearied assailant of the grave-yard nuisance in crowded towns.

It appears that on the western side of Clement's Lane, Strand, is situate a building called Enon Chapel, surrounded on all sides by houses, crowded with inhabitants, principally of the poorer class. The upper part of this edifice was opened for the purposes of public worship about 1823. It is separated from the lower part by a boarded floor: this was used as a burying-place, and crammed at one end even to the top of the ceiling with dead. It is estimated that within this space, not exceeding 1700 square feet, from ten to twelve thousand corpses have been deposited during the period of sixteen years. The chapel has been latterly converted into what is called a Temperance Hall, in which plain and fancy dress balls are held: an efficient band is engaged, and quadrilles, waltzes, reels, &c. are danced over the masses of mortality in the charnel-house beneath.

MOVEMENT IN THE PROFESSION.

A GENERAL meeting of the medical practitioners of the northern division of Cheshire was held in the board-room of the Stockport Infirmary, on the 12th ult.: Dr. Turner in the chair. The "Bill for the better Regulation of the Medical Profession" was generally approved, though dissent was expressed as to some of its enactments. The proposed constitution of the Council of Health was impugned, inasmuch as the great body of general practitioners are not adequately represented. It was regretted that registration is not made compulsory; and that some summary process of punishment is not prescribed for preventing unqualified persons from practising medicine or surgery. It was suggested that Government should not lend its sanction to empiricism by granting patents for secret medicines.

On Monday evening last, a meeting took place of the Medical and Surgical Association of the Borough of Marylebone: John Propert, Esq. V.P. in the chair. It was agreed that this Association merge into the "National Association of General Practitioners in Medicine, Surgery, and Midwifery," as instituted at the Hanover Square Rooms on the 7th ult.; that the Treasurer and Hon. Secretary confer with the official agent of the above association for the purpose of enrolling new names; and that some substantial mark of respect, to the extent of subscriptions, be conveyed to the Hon. Secretary. No efforts are to be spared towards obtaining a "charter of incorporation for a College of General Practitioners in Medicine, Surgery, and Midwifery."

 PROTEST OF THE PRACTITIONERS OF SURREY.

WE, the undersigned, being Members of the Royal College of Surgeons, residing in the rural parts of Surrey, desire to record our earnest and indignant protest against the exclusion in which we are placed by the proceedings of the Council of the College, in the matter of the recent Charter.

We protest against the arbitrary elevation of a few gentlemen above those of their brethren, who were previously their equals

in professional rank, senior to many of them as Members of the College, and not inferior to most of them in scientific and practical knowledge.

We consider the invitation to the mass of the profession to undergo examination, in order to obtain the rank, which has thus been conceded to a select few, to be an affront, which if we remained silent under it, we might be considered to have deserved.

W. Chalmers, Croydon.
 George Fletcher, Croydon.
 George Bottomley, Croydon.
 Joseph Bird, Croydon.
 Joseph Neville, Croydon.
 Henry A. Cleaver, Croydon.
 Richard Browne, Croydon.
 Edward Wallace, Carshalton.
 John R. Wallace, Carshalton.
 W. H. Butler, Guildford.
 Thomas Jenner Sells, Guildford.
 George Nathaniel Grane, Guildford.
 Albert Napper, Guildford.
 Henry Sharpe Taylor, Guildford.
 James Sledman, Guildford.
 J. H. Taylor, Guildford.
 Richard Eager, Guildford.
 James Remington Sledman, Guildford.
 William Hart, Dorking.
 William Chaldicott, Dorking.
 George Curtis, Dorking.
 Thomas Napper, Dorking.
 James Henry Reynett, Dorking.
 Wm. L. Nash, Leatherhead.
 Sydney Courtney, Leatherhead.
 John King Eager, Ripley.
 Abraham Crisp Gall, Ripley.
 John Ray, Bromley.
 G. P. Heyward, Egham.
 James Smith, Richmond.
 Frederick Chapman, Richmond.
 Frederick G. Julius, Richmond.
 Edward H. Hills, Richmond.
 William Todd White, Richmond.
 Philip Lugar, Richmond.
 Richard Hassall, Richmond.
 Peter Martin, Reigate.
 Andrew Sisson, Reigate.
 C. A. Parson, Godalming.
 Alfred Thomas Chandler, Godalming.
 Richard Balchin, Godalming.
 Robert Clark, Farnham.
 Edmund Yalden Knowles, Farnham.
 Robert Sledman, Great Bookham.
 George Smith, Haslemere.
 William Sledman, Haslemere.
 T. P. H. Johnson, Haslemere.
 J. N. Shelley, Epsom.
 Joseph Ward, Epsom.
 John Allan, Epsom.
 George Stillwell, Epsom.
 Arthur O'Brien Jones, Epsom.

Charles H. Butler Lane, Ewell.
Charles Stilwell, Ewell.
Thomas Graham, Carshalton.
T. E. Vernon, Tongham.
George Harcourt, Chertsey.
James Robert Cole, Chertsey.
Richard Smith, Chertsey.
Robert Harcourt, Weybridge.
Joseph Hewer, Cobham.
Thomas D. Martin, Cobham.
Abram Cox, Kingston on Thames.
Samuel Mitchell, Kingston on Thames.
Robert Lomas, Richmond.
Thomas B. Anderson, Richmond.
James Campbell Smart, Richmond.
Edward Boulger, Bletchingly.

[In a private note we are informed that this protest "is signed by nearly the whole of the practitioners of the country parts of Surrey, who are Members of the College of Surgeons," and that "scarcely a single name of any respectable practitioner settled in the principal towns of the county is wanting.—ED. GAZ.]

"HOTEL-DIEU SURGERY."

To the Editor of the Medical Gazette.

SIR,

THE appearance, in your last number, of some appropriate remarks on hospital surgery (?) in Paris, tempts me to forward you the leading facts of three cases which fell under my own observation, and which, I venture to think, should convince our migratory students that as good surgery may be found on their own side of the Channel as among our more "peli-hed" neighbours. Though no notes were made at the time (1838), the cases themselves were sufficiently striking to leave an unfading impression on my mind; and as one of them occurred at the Hôtel-Dieu, and in the clinique of a surgeon who has published criticisms on English practice, I shall give it first.

A young man, in good health, but of delicate frame, was admitted with what was originally paronychia, though, at the time he entered the hospital, inflammation had extended to the wrist, and matter was already supposed to be forming under the palmar fascia. When I saw him there was no doubt as to the presence of matter there, yet no outlet was made for it. On the second day following, not only the hand but the forearm was involved, and pus had found its way under the annular ligament, which, by its inelasticity, acted like a ligature on the swollen parts. Mons. — now for the first time said, that "there was matter; that it was

deeply seated; and, in all probability, in contact with the radio-ulnar interosseous ligament." What might a few days previously have been discharged by a small puncture, now required a most fearful incision for its evacuation. The bistoury was produced, plunged deeply between the pronators and supinators of the forearm, and carried up rapidly from the wrist to the bend of the elbow; the arm fell open (I can use no other expression), and a pint of matter instantly escaped, but with it—from the brachial end of the wound—forcible and regular jets of florid blood. The nature of the accident was immediately apparent, and attempts were made to tie the wounded bifurcation of the brachial artery at its point of division. This was not accomplished, and it was therefore cut down upon in the usual place, and secured.

I left the hospital painfully impressed by reflections on the case. Surely, said I, "putting aside the accident which attended the case, and which was clearly the result of reckless carelessness in conducting the incision,—so celebrated a surgeon as M. — knew that the matter should have been evacuated as soon as its presence became apparent in the thumb;—or, was that operation not sufficiently *éclatant* for him?" I could not dispel the conviction that the mischief had been allowed to go on in order to afford *les étrangers* an opportunity of witnessing this *incision menstre*.

The sequel is still more melancholy. The mischief continued to advance; the poor fellow became hectic, and, when I left Paris, it was contemplated to remove the arm at the shoulder-joint.

Case 2 was at La Pitié, the patient a man *et. 45*, and the injury compound fracture and dislocation of the ankle-joint—such an one as to require, according to English notions, immediate amputation. Mons. — looking round the bed and seeing only four of us, postponed the operation until the following morning, remarking that "the attendance of students was too scanty." On the day following, being at the hospital before the arrival of Mons. —, I had an opportunity of examining the patient with the dressers. There were, in addition to the ill-conditioned wound, alarming constitutional symptoms, and a suspicious-looking discoloration on the calf of the leg. Mons. — came, and again postponed the operation, for the same reason (we were "only half a dozen"), scarcely glanced at the part as he passed by, and upon the blackness being pointed out to him declared it to be ecchymosis. The man died that evening with gangrene.

Case 3, also at La Pitié, was that of a

woman whom I saw operated on by the same surgeon for cancer of the left mamma. The disease was found to extend into the axilla, and the dissection was long and difficult in consequence. In three quarters of an hour Mons. — had removed several diseased glands, and in doing so had completely exposed the axillary vessels and nerves, so that they could be distinctly seen from the uppermost benches of the theatre—a bold as well as a skilful piece of work. But what happened next?—Each of the assistants, one by one, was allowed by the operator to handle the artery, and, with finger and thumb, to convince himself, by testing its pulsation, that his astonished and admiring eyes had not deceived him. I remarked to an Englishman at my side, a stranger to me, but whose eye this may meet, that there could be but one result to such barbarity. Two days afterwards her bed was vacant. I learned that she was dead, and, being unable to obtain more satisfactory information from the dressers, was led to conclude that there had been secondary hæmorrhage.

Now, it is rather because these cases are, all three of them, exemplificative of bad surgery, than on account of the barbarity which distinguished their treatment, that I transmit them to the *GAZETTE*. That the English student may derive much information from his attendance on French hospitals is not to be denied; that he may see here what he will never see in his own country is equally certain; but that the kind of information thus obtained, at the expense of his better feelings, can ever be useful to him as a philosophical, humane, and high-minded practitioner is very questionable. That the French are distinguished by their talent, and, above all, by their splendid contributions to medical science, I am ever ready to allow; that some of their surgical proceedings are attended with unlooked-for success is also true; but that their failures are as a hundred to one of these successes the experience of eye-witnesses can confirm. The quack, in our own country, because he is unscrupulous, occasionally works a cure which a recognised surgeon has declared unattainable. Preserve us, however, alike from the uneducated ruthlessness of the quack, and the refined and brilliant execution of the French hospital surgeon.

CHIRURGUS BRITANNICUS.

London, Dec. 19, 1844.

VACCINATION, RE-VACCINATION, SUSCEPTIBILITY TO SMALL-POX.

OF 139 persons attacked with small-pox in the course of eight years, in a district of Prussia, 47 had not been vaccinated and 92 had been vaccinated; of the unvaccinated 15 died, of the vaccinated 1 was lost. In addition to these, it was known that 121 persons who had been vaccinated were in immediate attendance upon the patients labouring under small-pox, without becoming affected.

The susceptibility to infection from small-pox appears to increase in a very regular progression, according to the number of years which have elapsed since the vaccination: at the end of the eleventh year the susceptibility to small-pox contagion is again very considerable; and it appears to reach its maximum after the sixteenth year. Almost the same progression as occurs in reference to the number of years since vaccination was performed, also occurs with reference to the more perfectly developed or severer forms of small-pox in the vaccinated: up to the fifteenth year not more than one-fourth of the vaccinated are severely affected; between the sixteenth and thirtieth years somewhat more than one-third, and after thirty years half of those attacked have small-pox in a severe form. This appears very distinctly in the following table:—

Vaccinated persons.	Years elapsed since the vaccination.	Milder forms of small-pox.	Severer forms of small-pox.
4	1 to 5 years.	3	1
7	6 „ 10 „	5	2
6	11 „ 15 „	5	1
17	16 „ 20 „	11	6
23	21 „ 25 „	15	8
23	26 „ 30 „	14	9
10	31 „ 35 „	5	5
2	36 „ 40 „	1	1
92		59	33

The following general conclusions may be drawn:—

1st. Re-vaccination as a general rule is well undertaken between sixteen and twenty years of age, inasmuch as during this period the susceptibility or resusceptibility to small-pox is greatest.

2d. From the ninth to the tenth year after the first vaccination, the susceptibility to be affected anew with the vaccine poison exists in a considerable degree: re-vaccination among children of ten years of age having a like amount of efficacy, being successful as

frequently as among older individuals.—*Dr. Schüffer, Medicinische Zeitung*. No. 13, 1844.

RESULTS OF THE

RE-VACCINATIONS PERFORMED IN THE PRUSSIAN ARMY IN THE YEAR 1843.

In this year the number of individuals vaccinated amounted to 42,998, of whom the number who had <i>distinct</i> traces of having been already vaccinated was . . .	34,390
Having <i>indistinct</i> traces . . .	6,258
Having no trace whatever . . .	2,350
Of the number vaccinated the cow-pock ran its course regularly in . . .	22,062
Irregularly in . . .	8,613
and in . . .	12,323
the vaccination was without an effect.	
In the latter number, vaccination was tried again with effect in . . .	2,439
Without effect in . . .	9,671

Of those who were vaccinated, or re-vaccinated with effect, in the course of this year 1843, there were attacked with varicella . . . 11
With varioloid . . . 8
With genuine small-pox . . . 4

It therefore appears that of the 42,998 individuals who were vaccinated or re-vaccinated in the Prussian army, in the course of the year 1843, 22,062 were done with such effect that genuine regular cow-pock followed the operation. Of 100 vaccinated or re-vaccinated, consequently, the protective pustule went through its regular course in somewhat more than 51, which is very nearly the proportion which was observed in the years 1841 and 1842.

In the course of the year 1843 small-pox prevailed epidemically over the Prussian monarchy; and the disease appeared with unusual frequency among the troops, 167 individuals having been attacked with small-pox in one shape or another in the course of the year; the disease shewing itself as varicella in 72, as varioloid in 80, and as unmitigated small-pox in 15.

Of the whole number of cases, 30 of varicella, 40 of varioloid, and 6 of genuine small-pox, 76 in all, occurred in individuals who had not been vaccinated; and again, 31 cases of varicella, 31 of varioloid, and 4 of genuine small-pox, occurred in individuals who had been once or twice subjected to re-vaccination in former years without effect; and 11 cases of varicella, 8 of varioloid, and 4 of true small-pox, as already stated, occurred in individuals who had been re-

vaccinated with success in the course of the year. Finally, two persons were attacked, one with varioloid, another with genuine small-pox, who had not been vaccinated in their youth, but who had at a later period gone through a former attack of small-pox, distinct evidences of which they still bore on their persons.

The disease in the 23 men re-vaccinated in the course of the year was mild and favourable, except in a single instance, in which death followed. Two other deaths occurred in the Prussian army from small-pox in the course of the year 1843; one in a man who had been vaccinated in the year 1842, the other in a man who had been re-vaccinated in 1843 without effect.—*Medicinische Zeitung*.

IMPERFORATE HYMEN.

M. L., aged 18, had complained for about two years of severe pains in the abdomen, and had lost her former blooming appearance, at the same time that her abdomen became enlarged—a circumstance which led at first to the suspicion of pregnancy, but which was soon ascertained to be unfounded. Various means having been tried to restore the catamenia, which had been suppressed, and the patient getting worse and worse, I was called into consultation. I found the patient emaciated, pallid, with a flush upon the cheek, frequency of pulse, and complaining of thirst and sleeplessness. She was asthmatic, and motion of every kind, particularly mounting a stair, was very distressing to her. The abdomen was distended as in the last period of pregnancy, uniform and tense, but without fluctuation. She had constant desire to make water, but only passed a few drops at a time without pain. Having no appetite, she took very little nourishment; nevertheless, the bowels were moved daily, she having a constant desire to go to stool. In doubt as to the nature of the case, I explored per vaginam, and immediately discovered that the hymen was completely imperforate, and had thus retained the menstrual fluid. I at once divided the hymen with a lancet, upon which about three pints of very fetid putrid blood, mixed with slime, escaped. The patient fainted, but on recovering declared herself relieved; and under the use of bark and wine, and the return of the regular menstrual discharge, soon recovered her former fresh appearance and her health.—*DR. REHFELD, Medicinische Zeitung*, No. 11, 1844.

RELATIONS, IN POINT OF WEIGHT, OF THE NERVOUS PARTS OF MAN AND SOME ANIMALS.

By M. BOURGERY.

THE particular object of the author's memoir was to determine the relations in absolute weight of the nervous organs of man and several mammalia, and to draw such conclusions as the facts naturally suggested. Proceeding thus, M. Bourgery finds that the mean weight of the encephalon, or central nervous mass, being 2393·5* grains troy; the cerebral hemispheres stand for 16940·46 grains of that quantity, the cerebellum for 2176·7 grains, the cephalic prolongation of the cerebro-spinal axis for 1312·2 grains, the optic thalami and corpora striata taking 879·9 grains; the medulla oblongata, with the pons Varolii, 432·2 grains; and the spinal marrow 710·1 grains. It follows from this that in man the cerebral hemispheres, the peculiar organs of psychological manifestation, include a nervous mass which, with reference to the other portions of the apparatus, is *four* times that of all the rest of the cerebro-spinal mass, *nine* times that of the cerebellum, the putative organ for the combination of voluntary motions, nearly *thirteen* times that of the cephalic stem of the spinal marrow—comprising the organs of the senses, with the exception of those of olfaction, those for the transmission of general sensibility, and those of respiration—and *twenty-four* times that of the spinal marrow, the cord for the conduction and incitation of the sensibility and motions of the whole body, the viscera included. This predominance of the cerebral hemispheres, so considerable in man, declines decidedly when we pass from man to those animals which most resemble him; and it diminishes gradually in these from the dog to the horse, cat, ox, and sheep; in other words, nearly in the ratio of the intelligence. The following are the conclusions which the author draws from his inquiries:—

1st, As it follows, from all the researches of modern science, that in man the extent and variety of intelligence are generally in proportion to the anatomical quantity of the cerebral mass, and that this determination becomes rigorous when to the quantity the physiological condition of quality is super-

added; so also in animals do the extent and variety of their instincts appear to be in relation with the quantity of the cerebral substance in each of them, the question of quality between individuals of the same species still considered. 2d, The sum of the instincts in animals compared with one another is by so much the greater as the proportional weight of the cerebral hemispheres, and perhaps also of the cerebellum, is more considerable in relation to that of the nervous centres of the cerebro-spinal axis. 3d, Life being nothing more than a harmony between accordance and antagonism, in other words, a perpetual struggle of organisms with physical agencies the nervous system, the material agent of life, performs three kinds of functions—the first, spontaneous, or proper to the living being, and which cannot proceed solely from the agency of the general laws of nature; the second, physical, and the third, chemical; these being severally shaded one into another by means of mixed intermediate functions. The spontaneous functions indicate the destination of the living being, the others form relations for the support of the material body in harmony with the laws of chemistry and general physics.

These conditions stated, M. Bourgery infers, with reference to the question of relative quantity in the nervous substance: 1st, that a cerebral nervous mass four times the size of all the rest of the cerebro-spinal organs is required for the psychological manifestations of man. 2d, The instincts of animals do not require more nervous substance than a quantity five or six times less than that which is proper to these higher manifestations. The quantity of nervous substance necessary to the organs for their several functions diminishes gradually in the following order:—

- (a.) The senses and the nerves of general sensibility.
- (b.) The physical function of motion.
- (c.) The physico-chemical function of respiration.
- (d.) The chemical function of digestion.
- (e.) The chemical function of the organic elaborations. And
- (f.) That of assimilation.—*Academie des Sciences*, Sept. 23d.

FUNCTION OF THE SKIN.

* [That is to say, 46·667 oz. avoirdupois, a weight which approaches the mean weight of the adult male English brain between twenty and thirty years of age, which, according to Dr. Boyd, it is 46·178 ounces avoirdupois, but this is without the spinal marrow, which is included in M. Bourgery's estimate.—*Vide* Dr. Boyd's Table, end of Wagner's Physiology, by Willis.—ED. GAZ.]

M. FOURCAULT, whose interesting and novel observations on this subject are generally known, has been pursuing his inquiries still further, and noting more of the phenomena that accompany the suppression of the cutaneous exhalation. He finds, for instance, that it is easy to produce albuminaria in

many animals, both by covering the surface of the uninjured skin with an impervious glaze, and by the somewhat barbarous procedure of stripping the creature of its skin entirely. Strange to say, albuminous urine was secreted more certainly in the latter circumstances, if the raw and bleeding surface of the body were covered with an impervious varnish, than if it were left naked.

M. Fourcault's explanation of the appearance of the albumen in the urine, when the skin is covered with an impervious varnish, is connected with a retention of lactic acid in the blood: "In examining successively the effects of the elements of the cutaneous transpiration upon albumen," says M. F. "it was easy to perceive that the lactic acid which comes to be in excess in the blood, when the acid excretion of the skin is interrupted, is the true cause of this phenomenon, and of the other chronic alterations of the albumen; among which are found hydro-albuminaria, scrofula, tubercle, hide-binding among infants, elephantiasis, lepra, phlegmasia alba dolens, &c."

His conclusions are these:—

1st. The skin is a purely excreting organ, and the products of the perspiration are not formed in its tissue.

2nd. When a living animal is flayed, its internal temperature remains long unaffected; albuminaria is not the result of this operation; when it occurs, it may disappear without the circumstances changing.

3rd. The artificial suppression of the cutaneous exhalation determines five orders of phenomena: *a*, a great change in the blood; *b*, a great fall in temperature; *c*, supersecretions and effusions of different natures; *d*, local lesions and vascular engorgements; *e*, alterations in the urine; among the number, albuminaria, which may also be determined, though this happens much more rarely, of a primary affection of the kidneys.

4th. The introduction of lactate of soda into the veins produces albuminaria, by favouring the formation of an excess of lactic acid in the blood.

5th. When the acid secretion of the skin is suddenly suppressed, a profound alteration of the organic elements of the blood is determined. Such an alteration is observed in the Asiatic cholera, in plague, yellow fever, and some severe diseases of these countries.

6th. When the secretion is slowly or gradually suppressed, a number of chronic diseases are produced; amongst which, we reckon albuminaria, and the other alterations of the albumen already indicated.—*Comptes Rendus*, &c., No. 19, 1844.

[We presume that the facts are all as M. Fourcault states them. His theoretical views must of course be distinguished from them; or, what should become of these

really valuable additions to our science, should it be found that the lactic acid which Berzelius invoked as a constituent of all the animal fluids, should be found to be a dream, as we are lately assured it is with regard to the urine?—*ED. GAZ.*]

CASE OF FUNGUS FROM THE SYNOVIAL CAPSULE OF THE KNEE

TREATED BY COMPRESSION.

THE subject of this case is a young man, aged thirty, of a lymphatic and deteriorated constitution. On the internal surface of the knee there is an ulcer of the size of the palm of the hand, from whose base has sprung an ill-conditioned fungus of the size of half an orange, and which, according to M. Gerdy, originates from the external surface of the synovial capsule, and has no communication with the joint. The articular movements are quite free, and cause no discharge of pus, as would be the case if the disease communicated with the synovial cavity. In M. Gerdy's opinion this is the best test that can be employed for the purpose of ascertaining if a tumor containing fluid, and which has been opened, communicates with the neighbouring articulation or not. The patient has an affection of the same nature on the dorsal surface of the wrist. The fungus neither appears cancerous, nor has any tendency to bleed: at the knee, as well as at the wrist, it is composed of an enormous number of granulations, of the size of a nut, having a greyish colour, and of a soft dirty aspect, and yielding a large quantity of foetid pus. The means employed by M. Gerdy for the treatment of this affection are, compression by means of strips of adhesive plaster, and under the influence of these, and rest, the disease is improving. M. Gerdy has met with one other case of this rare disease; it was situate at the elbow joint, and occurred in an individual in whom he had amputated the leg, but who refused to submit to the loss of his arm; it was treated by compression, and a cure followed, but there was ankylosis of the joint.

In a pathological point of view this is a rare affection; indeed, it is the first time we have met with it. An attentive examination of the joint leads to the idea that there is hypertrophy of the whole synovial capsule, with tendency to fungus from its external surface. It appears to us that the affection may be compared to certain non-cancerous fungi which occur on the mucous membrane of the alveolar processes, and which have been denominated *epuli*. Its co-existence at the knee and wrist at one and the same time, and the deteriorated state of the con-

stitution, would lead us to suspect that it originates from some peculiar diathesis. There are, however, no distinct signs of scrofula, although the patient has a pale, cachectic look; but this appearance is, perhaps, an effect of the local disease itself. However this may be, M. Gerdy has commenced the treatment by compression, to which he proposes to add the internal use of the iodide of potassium. A marked diminution in the size of the vegetations has already taken place, under the use of the compression alone.—*Annales de Thérapeutique*; and *Dublin Journal of Medical Science*.

SUPERFECUNDATION ?

A sow which had already farrowed five young ones, made a second accouchement of five more a fortnight afterwards. The second litter were small but lively. The sow, which had had several litters before, generally produced from ten to twelve at a birth.—LEHWESS, Veterinarian, in *Medicinische Zeitung*, No. 11.

RECEIVED FOR REVIEW.

Mr. Lizars' Text-Book of Anatomy for Junior Students. Part III.

A Practical Treatise on Diseases peculiar to Women: illustrated by Cases derived from Hospital and Private Practice. By Samuel Ashwell, M.D.

The Medical Remembrancer; or, Book of Emergencies. By Edward B. L. Shaw, M.R.C.S. &c.

Researches and Observations on the Causes of Scrofulous Diseases. By J. G. Lugol.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

List of Gentlemen admitted Members, Dec. 20.—G. I. Wycherley.—J. Jolliffe.—H. J. Oldham.—G. E. Givins.—G. Rigden.—J. T. Newberry.—J. W. Littler.—J. Mason.—C. Townsend.

Dec. 23.—W. Ross.—W. H. Cameron.—F. B. Phillipson.—R. Bark.—G. Jeffreys.—J. Godden.—J. Bromfield.—W. W. James.—T. B. Bumstead.—S. Burgess.—N. Brangwin.—J. Pechy.—G. F. Fletcher.

APOTHECARIES' HALL.

Gentlemen who have obtained Certificates, Dec. 19.—J. Williams, Leintwardin, Herefordshire.—J. C. Coulton, Lyme Regis, Norfolk.—P. Brown, St. Helens, Auckland.—E. H. Millin, Hull, Yorkshire.—G. F. Mitchellson, London.—G. Buckell, Newport, Isle of Wight.—G. A. Hallion, Royal Navy.—F. C. G. Ellerton, Aberford, York-

shire.—H. Fenton.—J. Hewitt.—C. Brookes, London.—B. T. Lowne, Brixton, Surrey.—R. Dinham, Taunton.—F. Rowle, Liskeard, Cornwall.—M. O. Larmuth, Salford, Lancaster.

Dec. 26.—W. V. W. Langley, Brixham, Torbay.—N. J. Dampier, Colinshay's House, Somersetshire.

MORTALITY OF THE METROPOLIS.

Deaths from all causes registered in the week ending Saturday, Dec. 21.

ALL CAUSES 1393
SPECIFIED CAUSES 1390

I.—Zymotic (Epidemic, Endemic, and Contagious) Diseases, 258; among which, of—	
Small Pox	48
Measles	52
Scarlatina	42
Hooping Cough	31
Croup	15
Thrush	4
Diarrhoea	9
Dysentery	2
Cholera	2
Influenza	3
Typhus	35

II.—Dropsy, Cancer, and other Diseases of uncertain or variable Seat 107; among which, of—	
Inflammation	0
Dropsy	35
Scrofula	5
Cancer	5
Atrophy	19
Debility	14
Sudden Deaths	17

III.—Diseases of the Brain, Spinal Marrow, Nerves, and Senses, 200; among which, of—	
Hydrocephalus	36
Apoplexy	25
Paralysis	28
Convulsions	74
Insanity	3
Delirium Tremens	1

IV.—Diseases of the Lungs, and of the other Organs of Respiration, 511; among which, of	
Pneumonia	163
Hydrothorax	11
Asthma	68
Phthisis or Consumption	146
Diseases of the Lungs, &c.	31
V.—Diseases of Heart and Blood-vessels	46

VI.—Diseases of the Stomach, Liver, and other Organs of Digestion, 61; among which, of—	
Teething	15
Gastritis	0
Enteritis	16
Tabes	7
Hernia	3
Disease of Stomach, &c.	4
Disease of Liver, &c.	6
VII.—Diseases of the Kidneys, &c.	4

VIII.—Childbirth, Diseases of the Uterus, &c. 17; among which, of—	
Childbirth	10
Disease of Uterus	6

IX.—Rheumatism, Diseases of the Bones, Joints, &c.	7
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X.—Diseases of Skin, Cellular Tissue, &c.	1
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XI.—Old Age	125
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XII.—Violence, Privation, Cold, and Intemperance	53
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WILSON & OGILVY, 57, Skinner Street, London.

THE
LONDON MEDICAL GAZETTE,

BEING A
WEEKLY JOURNAL

OF
Medicine and the Collateral Sciences.

FRIDAY, JANUARY 10, 1845.

LECTURES
ON THE
NATURE AND TREATMENT OF
DEFORMITIES,

*Delivered at the Brompton Square
Institution.*

By R. W. TAMPLIN, F.R.C.S.E.

Surgeon to the Institution.

Division of the vastus externus and fascia lata for knock-knee. Relaxed condition of the ligaments of the knee-joint, admitting of undue motion antero-posteriorly: treatment of. Contraction of the knee commonly called ankylosis—congenital, non-congenital. Causes of non-congenital acting directly: injuries of various kinds; inflammation simply; rheumatism; scrofulous disease, or “white swelling,” with abscesses about the joint: treatment of. Indirect causes: injuries to the spine—cerebral or spinal irritation.

In my last lecture I omitted to mention to you the mode of dividing the vastus externus and fascia lata, which is frequently necessary in the severe forms of knock-knee. After having divided the tendon of the biceps flexor femoris, let the assistant continue the forcible extension: you then examine the fascia lata just above the external condyle of the femur; if it is tense, pass a sharp-pointed knife beneath it and the vastus externus, from behind forwards, and divide it from within outwards. It is a simple operation, and one free from any casualty, as you have nothing but the bone on the inside. After the division, proceed as I described to you with the after-treatment.

To-day we shall consider, 1st, a condition of the knee-joint occasionally met with, which consists in a general elongation of the ligaments connecting the joint, and admitting of an undue amount of motion antero-posteriorly, which allows of a greater amount of

extension, without any permanent deformity or malposition, the malposition taking place only during the time the patient is taking exercise. It consists, then, in a relaxation of the crucial ligaments, combined with a generally diminished tone of the muscles, as well as of the body generally, allowing the head of the tibia on its anterior surface to approximate to the anterior surface of the condyles of the femur, the posterior surface being separated to a greater extent than is natural, whereby the thigh and leg appear curved posteriorly, and the popliteal space lost, and appearing convex instead of concave. This affection is generally met with in children of delicate constitution, sometimes combined with paralysis and antero-posterior curvature of the spine, which has been occasioned by ulceration of the bodies of the vertebrae; and patients affected in this way possess no steady method of walking, for as soon as the body is carried beyond its perpendicular position with the leg which is supporting the body, whilst its fellow is carried forwards, a sudden yielding and jerk take place, owing to the relaxed condition of the ligaments, as far as the ligaments admit of, and the muscles for the moment have no firm attachment, so that the patient appears to sink in a measure on each step taken. This produces a great sense of weakness and difficulty in walking, with inability to take much exercise without suffering from fatigue; and the very circumstance of walking occasions an increase of the deformity, in consequence of the continued stretching kept up in the ligaments. Of course your treatment will be directed to such means as will improve the general health of the patient, together with the best and most uniform support to the knee-joints; as it is only by keeping the knee-joints fixed, or, at all events, so confined that any undue motion is effectually prevented, that you can by possibility effect a cure, as if this play in the ligaments is allowed, they cannot be expected to contract upon themselves, and to limit the motions

of the joint to its natural standard, no matter how much the health of the patient may be improved.

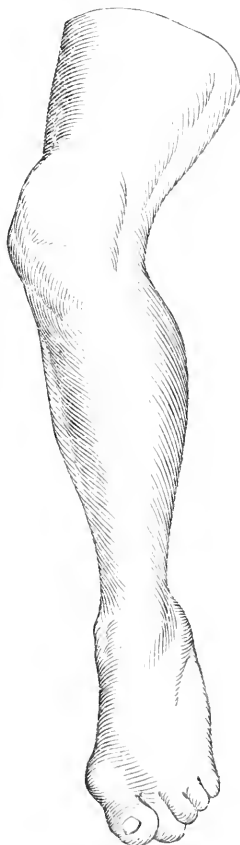
The means I have adopted, with those unable to go to the expense of irons, is a straight splint, well padded, behind the leg, either retained in its position with strapping or bandage. This compels the patient to walk with a stiff knee for a time, but will nevertheless effectually overcome the deformity if persevered in. In others more fortunately circumstanced, I have ordered irons having a stop-joint at the knee, which enables them either to use the joint or not as they may feel inclined, with a screw pad pressing on the anterior surface of the femur, just above the knee; with a similar one behind the calf, just below the knee. These pads you will be enabled so to adapt that no motion can take place beyond the extent wished for; the knee itself being firmly held by a double knee-cap. I certainly prefer that the knee should be kept stiff whilst the patients are taking exercise, as the less amount of continued motion the better, in my opinion, although that motion may not be in itself excessive. The patients can then, if they wish it, press the bolt backward which retains the iron in the straight line, and flex the joint whilst in a sitting posture.

The time occupied in treating a case of this kind will vary according to the general health of the patient, and the success attending your efforts made to prevent any undue motion of the joint, which must be most unremittingly persevered in until the patient is enabled to walk, unassisted by support, without the yielding taking place; and even then I would not advise the entire absence of the support. It is much better to commence in this way, say half an hour daily for the first few days; and if no return of the deformity occurs, or increased motion takes place, extend it to an hour; and so on, that the patient may be accustomed to forego by degrees the support; and should any relapse take place, let any increase of it be effectually and at once prevented.

We now come to one of the most important of all deformities, the most important also of the knee-joint, involving almost invariably the necessity for a patient afflicted with it walking with crutches, or a wooden leg, which is of course a severe inconvenience, independently of the deformity itself, preventing those suffering from it taking any active exercise; I allude to *contraction of the knee-joint in the flexed position*. I say in the flexed position, because, in knock-knee you have muscular contraction, as well as in the straight or extended position of the joint, as I shall hereafter mention to you; this is commonly called *ankylosis* of the knee. This deformity or *malposition* (for that is its real character), consists either of

a permanently flexed position solely, or flexed and everted combined, a semi-rotated condition of the tibia on the femur—that is, if the legs were brought into the extended position, the knees would be found to incline inwardly to a greater or less extent, and the foot and leg everted. There is also another change of the relative position of the bones frequently met with in combination, namely, a receding of the tibia upon the posterior surface of the condyles of the femur, (vide figs. 3 and 4; this last involving the necessity of an alteration of structure, or of the natural relative length of the ligaments being lost, as will be hereafter seen. It is a congenital and non-congenital deformity; but so rarely is it met with congenital, as to form the exception. In the congenital deformity you have simply a contraction of the flexors of the knee, unaccompanied with any altera-

FIG. 1.



An example of congenital contraction of the knee, taken from a patient aged 19, in whom both knees were similarly contracted. The joint, as it may be observed, retains its normal position.

tion in the healthy condition of the joint itself, but combined occasionally with one or other of the deformities of the feet mentioned. (Fig. 1). I have once met with it without any deformity of the feet; once with talipes calcaneus of both feet, both knees being contracted; twice with talipes varus of both feet, in one of which a relaxed condition of the whole of the ligaments of the tarsus existed in one foot, allowing of free motion between all the bones, and in the same case congenital luxation of the right hip. I say luxation, because the word conveys what I wish you to understand, although, upon examination, so far as the muscles and integuments admitted of, no trace of an acetabulum could be discovered. The head of the bone could be distinctly felt on the dorsum of the ilium, and was freely moveable in every direction; it evidently was perfectly exposed and free. The leg could be drawn down without any impediment being felt beyond the resistance of the muscles, which leads me to suppose there is at all events no brim of the acetabulum or cotyloid ligament. That patient suffered also from severe lateral curvature, whether congenital or not I am unprepared to say, combined with a semi-rotated or twisted position of the vertebrae, and flattening of the ribs, which presented posteriorly an acute angle; in fact, a more generally deformed condition, or more miserable object, can scarcely be imagined. In all my experience I have never met with a more distressing case. In the case in which double varus coexisted, the skin was adherent to the patella, and was indented, presenting the appearance of an old cicatrix. In the first case mentioned there was no additional deformity or malposition, simply contraction of the flexors, and perfect voluntary power of all the muscles, so far as the contraction admitted of, (vide fig. 1) the joints themselves being perfectly healthy, and the articulating surfaces in their proper relative position, that position being the flexed, but not quite to a right angle. The patient was also enabled to flex the joints to their full extent, and to extend them, as I have said, as far as the contraction admitted of, at will; there being, in these cases, no evidence of any diseased condition existing, or having existed, in the nerves or muscles. I regard this deformity also as the result of position in utero, when unattended with malformation or deficiency of formation in any of the natural structures; for I imagine it is not more difficult to conceive that the extremities of a child may be so placed, during uterine existence, that they will admit of very little motion in the extended position of the knees, than to imagine the feet being placed and kept in those positions in which we find congenital deformities of the feet.

With regard to the non-congenital, which

you will have the more generally to treat, and which are by far the most serious and difficult, the causes are numerous; and I would divide them into those which act directly, and those which act remotely, on the articulation. Of those acting directly may be mentioned, injuries of various kinds; inflammation of the synovial membranes, whether it be confined simply to the joint, or whether it be the result of rheumatic condition generally, affecting one or both of the knee-joints particularly, and resulting in contraction of the flexors; inflammation of a chronic character of the synovial membrane, arising from scrofulous disease of the joint itself, or, as is most frequently met with, in the neighbourhood of the joint, and producing chronic inflammation of the synovial membrane, from the irritation occasioned by its close proximity to the joint, oftentimes surrounding it in almost every direction, but without causing any change of structure in the joint itself, beyond the synovial membrane. Among the remote causes may be mentioned, injuries to the spine, producing pressure on the chord, and paralysis, in the first instance, of the entire lower extremities; cerebral or spinal irritation, or disease, producing partial loss of power in the extremity or extremities, sometimes complete loss of power, in which case, upon recovery from it, as in the last mentioned, contraction of the flexors is a consequence. The first mentioned, namely, injuries to the joint, consist of the various mechanical accidents to which every one is exposed, such as the joint being jammed, or those caused by any sharp or blunt instrument, the joint itself being exposed or punctured. In either case inflammation more or less severe is the consequence, during the existence of which the joint is kept in the flexed position, and upon recovery from which a permanent contraction is found to exist, with or without alteration to a greater or less extent in the synovial membrane; as I mentioned to you, when speaking of the deformities of the feet, that there is a constant effort instinctively exercised to keep the joint at rest, the slightest motion occasioning the most severe pain; and the position in which there is the least amount of pressure on the articular surfaces, and therefore on the synovial membrane, is undoubtedly the flexed position, as in the straight position, even without the additional pressure occasioned by the weight of the body, there must be a small amount of pressure between the articular surfaces; and be this ever so slight, if the synovial membrane is inflamed, it must of necessity increase the inflammation, and consequently the pain, which is, as you are aware, at all times most acute, and requires in its active stage the most prompt and vigorous measures for its relief. The flexors, therefore, are constantly acting, and become eventually

contracted, from the flexed position being maintained during the inflammatory attack; and should there be any disorganization of the joint itself, or parts composing it, you will have also more or less lateral or posterior displacement, combined with the flexed position. In those cases, of which we have had several, I have been of opinion that the synovial membrane has become altered in structure, thickened and inelastic; and there have appeared also adhesions of some kind, as in all these cases I have found the joint to possess scarcely any perceptible motion; and if any, the smallest in amount, and that motion being independent of the muscles themselves, as you will generally be enabled to discover, provided you continue your extension for some minutes, by which method the muscles will relax, and you will be enabled to form a correct opinion of the resistance existing in the joint itself; besides, in these cases, you will generally find the joint not only flexed, but immoveable in the flexed position; that is, you will be unable to flex it beyond the position you find it in, which can be invariably accomplished in cases where the joint itself retains its integrity, and as may also be seen in cases arising from paralysis, when free motion exists so far as the contraction admits of. These cases, then, arising from wounds inflicted on the joint itself, will appear, upon a superficial view, to be perfectly ankylosed, and will require the most scrupulous care in examination before you decide on their real condition.

In one case admitted into this institution, which arose from a cart-wheel passing over the thigh, just above the knee, there was motion, but of an elastic kind; and after the leg had been forcibly extended, it returned with an impulse to its contracted position, without the flexors acting in the least, so that it was evident there was some adhesion or adhesions in the joint itself. The flexors I divided, however, and the extension was kept up for some weeks with very little benefit; and from the severity of the increasing forcible extension necessary, the patient suffered so much that he left the institution, determined to submit to no more treatment. But after a few weeks he returned penitent, and engaged a lodging close to the charity, when I re-operated, and again commenced extension. We progressed, as heretofore, but very slowly, and, from his good conduct, the committee readmitted him. From the constant pressure again kept up on the anterior surface of the thigh, a slough made its appearance, upon the healing of which I resolved to make no farther attempts, and informed the patient that I feared nothing more could be done for him, and advised his procuring an instrument to hold and fix the joint in the position in which it then was. This

frightened him, and he set to work to screw his leg straight at all hazards, upon doing which a sudden and loud snap was heard, compared to the report of a pistol by the other patients, and immediately his leg could be placed in the straight position, or nearly so; since which occurrence the leg has been kept, without difficulty, very nearly straight, and he has left the charity with a comparatively useful limb. This, therefore, is a valuable and instructive case, as it justifies an amount of force being used in similar cases, after other means have failed. He suffered pain only upon motion, and has not been in any way inconvenienced beyond the temporary pain mentioned.

I also stated inflammation of the synovial membrane as a cause: I mean idiopathic inflammation of the joint, which arises without any apparent cause, and without the general health having previously suffered: in this case, if the disease is not stopped at its onset, effusion into the synovial cavity is the result, and, of course, a change, whether permanent or not, in the synovial membrane, is a consequence (Figs. 2 and 3). In simple inflammation, however, the results are not so severe, if properly attended to, as in inflammation arising from injuries, or from a rheumatic state of the constitution, when it assumes more of a specific character, and is oftentimes more obstinate, yielding but slowly to treatment. But whether simple or not the effects are the same, if the position of the limb is unattended to, namely, contraction of the flexors of the joint, which contraction becomes permanent, whether there is or is not any evident change in the secretory surface of the synovial membrane. In rheumatic inflammation, as I mentioned, a change of a serious character frequently results, producing adhesions, which, if allowed to remain passive, terminate in complete ankylosis. Several cases have presented themselves in whom not the slightest motion could be detected by the exercise of great force, and that after a few years' duration. In fact, cases have occurred where three years only had elapsed and this condition of the joint existed, rendering any attempt at cure futile. Of course there are exceptions to this; and if motion is found to exist, and all evidence of diseased action gone, you will at all events use every effort to restore the position of the limb and the functions of the joint. This cause is therefore as serious, if not more so, than any we have considered or shall have to mention, and will require the greatest attention and perseverance in the treatment.

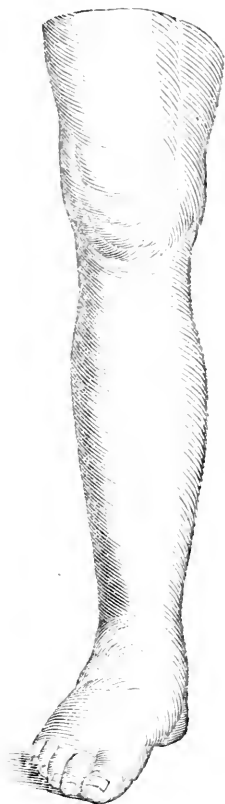
We come now to another cause mentioned, namely, scrofulous disease of the joint, or in the neighbourhood of the joint. This is, as you are all aware, a very common cause, and one which frequently results in the loss of the limb by amputation; and I would beg to

FIG. 2.



An example of contraction of the knee from inflammation, in which the displacement, viz. partial dislocation of the tibia backwards, is most apparent. Taken from a female, aged 19 years (vide also fig. 4).

FIG. 3.



The same after treatment. The position of the bones was perfectly restored by means hereafter to be mentioned.

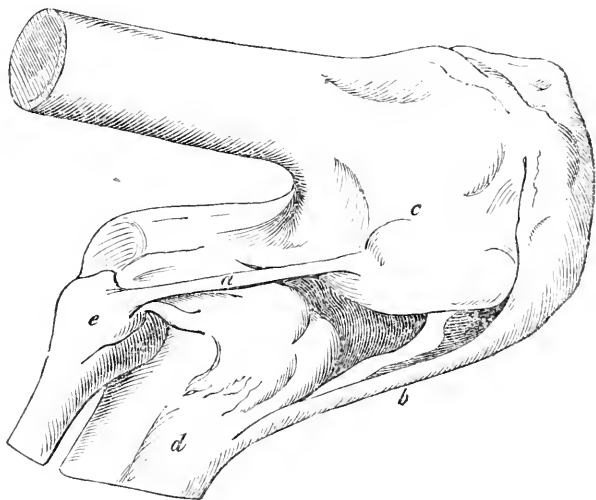
draw your attention to what I consider to be the actual condition of the joint and the character of this disease. My remarks must apply to children and young subjects, as, of course, in the adult this disease does not present the same uniform character, nor have adult patients that innate restorative power which is so active during early life. Now I regard this affection as one of the ordinary processes attending a departure from the healthy state, whether it attacks the bones surrounding the joint, the synovial membrane, or the cartilages and ligaments themselves, and not as a disease of a malignant character, admitting of no known remedy, and which terminates ultimately in the loss of the part affected, and oftentimes in the loss of life. Now, what are the physiological

conditions of the parts entering into the composition of a joint? It is composed of bone, ligaments, and a delicate semi-transparent membrane, called the synovial membrane. The bone is the foundation, if I may so speak; the cartilage is so arranged that it gives an elasticity and smoothness, and in this way facilitates motion, whilst the synovia secreted by its membrane lubricates the surfaces; and by these means the motions of the joints are rendered perfectly free and uninterrupted, the articulating surfaces gliding insensibly over each other. The bone and cartilage exist in a comparatively low state of vitality, and do not possess the power of resisting the effects of disease, at least only in a comparatively diminished degree, whilst the synovial membrane readily

becomes the subject of disease, and, when it does so, the disease is generally of an acute character, which, in a short space of time, alters its secretion, and if the inflammation proceeds, the membrane itself becomes altered in character, and, instead of facilitating the movements of a joint, becomes in fact a direct obstacle, and, according to the amount of change in structure, limits or entirely prevents the natural motion taking place. From the fact of bone and cartilage possessing a *low state of vitality*, and being incapable of resisting to any extent, the effects of diseased action, after positive disease has existed and subsided, the restorative process is, as might be easily anticipated, exceedingly slow, under the most favourable circumstances, and if the cartilage has been destroyed, it does not effect a reproduction, but is supplied by a sort of ivory substance, polished and hardened, supposing the diseased action stops at the cartilage. The synovial membrane also, if a great change has taken place, does not reassume its thin, elastic, semi-transparent character, but remains more or less thickened, and its secretion is either altogether lost or altered

in quantity and character, and although motion is admitted of, yet it is not that free unlimited motion which the joint possesses in its healthy condition. In the knee-joint you have also the crucial ligaments surrounded by the synovial membrane, and forming the most important connection of this articulation. If, then, inflammation takes place in the joint to any extent, of course the ligaments must suffer more or less, becoming softened and unable to fulfil the office for which they exist, namely, retaining in position the articulating surfaces of the condyles of the femur and head of the tibia. Now, by becoming softened or weakened, of course the muscles would tend to occasion a displacement of these bones to a greater or less extent, independently of the contracted or flexed position, as if the bones were not firmly held in apposition. The head of the tibia will be drawn out of its natural position by the constant action of the muscles, in the direction in which there is a preponderance of power, and this direction is both backwards (vide Fig. 2), and lateral, or both combined, (Fig. 4) occasionally also with more or less rotation of

FIG. 4.

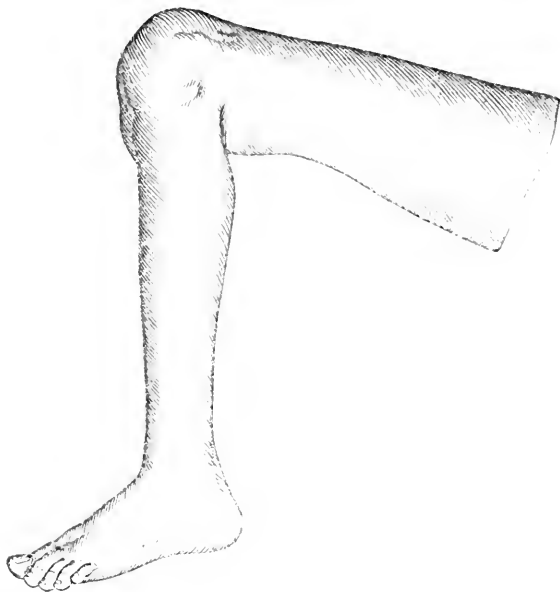


A diagram of a preparation in the museum of St. Bartholomew's Hospital, for which I am indebted to the kindness of Mr. Lawrence, illustrating the almost complete dislocation backwards of the tibia upon the femur, arising from inflammation of the joint and subsequent contraction. A, *External lateral ligament*, which may be observed to be almost horizontal; B, *Ligamentum patellæ*; D, *Tibia*; E, *Fibula*; C, *Femur*.

the tibia, — (Fig. 5) the lateral deviation being, to the outside, from the great power exercised by the biceps, flexor femoris, as this muscle is not only very powerful, but

passes more on the outside than the semi-membranous and semitendinous do in the inside in their course to their insertion; these two last mentioned lying more behind

FIG. 5.



An example of contraction of the knee, combined with abduction, and slight rotation outwards of the tibia, as may be observed arising from the scrofulous disease about the joint. Taken from a patient now in the Charity.

the joint until they wind round the head of the tibia. It is in this way only that I can explain the abduction of the leg, of which we shall presently speak. The restorative process is, as I have just stated, of necessity an exceedingly slow and tedious one, under the most favourable circumstances; whether the disease attacks the joint itself or the extremities of the bones surrounding it primarily, the joint secondarily. It requires the joint to be kept at rest, or nearly so, and a uniform support to the entire limb; the natural temperature maintained, and the general health supported, and this most uninterruptedly followed up. By these means I believe that most diseases of the joints, in young subjects, provided they are not malignant, which I do not believe they can be considered, may be cured, and even if the patients have suffered from destruction of the joints and of the bones, or that portion forming the articulating surfaces, although all motion may be out of the question, yet I distinctly maintain that an ankylosed knee, with the use of the foot, is far preferable to a wooden leg; and the most favorable position may be selected during the period the restorative process is going on. In the majority of cases of strumous disease, the joint itself is but slightly affected, although the surrounding parts are one mass of disease.

The inflammation consequent on the irritation of that disease is of a very chronic character, and does not appear in those cases to risk the integrity of the joint, although there may be, and generally is, an increased secretion of synovia, but beyond this the joint does not appear to suffer; at least, in an immense number of cases. I have witnessed the most frightful amount of disease, appearing in a superficial view to exist in the joint itself, and yet the joint remain perfectly sound, with the exception of the increased quantity of synovia.

I have now a case under treatment in which the joint presented the appearance of a fungous mass, with openings in every direction—enormously swollen. The anterior surface of the patella, the femur immediately above the condyles, the tibia immediately below the articular surfaces, were all diseased, and yet the joint itself was free, except, as mentioned, the quantity of synovia increased; yet this case, the most frightful that can be imagined, is yielding to treatment, and the general health of the patient is restored.

A case occurred to me three or four years since, of which the following was the condition of the patient: the girl, about 8 years of age, was sitting on the bed in the most miserably emaciated condition, and was stated to have been suffering from disease in

the knee between two and three years. There were five openings, two on the outside, just above the condyles, one on the inside, and two on the patella. The three first communicated with the femur, the two last with the patella. The parents stated at least half a pint of matter was discharged daily. Of course, this was somewhat exaggerated, but an immense discharge was then evident, of that peculiar, thin, unhealthy secretion, common in scrofulous diseases. The knee was contracted beyond a right angle, so that you could not pass a thin piece of sponge between the leg and thigh, in the situation of the popliteal space. The knee itself was swollen and distended with fluid. She was suffering from acute hectic fever, with profuse perspiration and severe pain on the slightest motion. The pulse was fluttering, the bowels relaxed; in fact the child presented the appearance of a person in the last stage of consumption. I ordered her an opiate, with the *hyd. c. cretâ* every night, the *conf. aromat.* and *ext. cinch.* 3 or 4 times a day, a soft linseed-meal poultice, made by stirring the meal into boiling water, over the whole of the knee-joint, covered with oiled silk. A tin splint, bent at the angle at which the knee was flexed, with pads, and retained by means of a flannel bandage, from the toes upwards above the knee, thereby keeping up the natural temperature of the entire limb, as well as a uniform gentle support; together with a nourishing diet, consisting of eggs, milk, meat, beer, and then two glasses of port wine daily, commencing the stimulants by degrees. In a few days, the general irritability subsided, and the pain in the knee was relieved, the hectic left her, and the discharge altered its character. In fourteen days she could be moved without a complaint.

This treatment was continued six months, varying the tonic, at the end of which time all the openings were closed, and the swelling of the joint almost gone. The leg was extended in the most insensible manner, by gradually straightening the splint during the period the disease was subsiding, and without pain being produced. As soon as the openings were healed, I supported the joint with *emp. cerat. saponis*, and continued the bandage and splint, and in twelve months the leg was brought into the straight position, and the girl could use it without any assistance. I then directed the joint to be exercised daily, by forcibly flexing and extending it, as far as the feelings of the child would admit, and in this way the motion of the joint was restored, the muscles of the thigh and calf developed themselves, and a perfectly useful limb is the result. In this case amputation was advised by several surgeons as the only means of saving the child's life.

I would beg to mention another case similar in some respects, of a boy 9 years of age, in whom what is called white swelling had existed for eighteen months. There were no openings, but a bag of matter situated in the upper and outer side of the femur just above the condyles. The joint also distended with fluid, and contracted beyond a right angle. The same treatment was followed here: the matter gradually and entirely disappeared, the swelling of the joint reduced, and by means of the splint, the leg was brought, in eight months, into the straight position, and the boy enabled to use his leg, supported with a straight splint. In this case also amputation was recommended, and would certainly have been carried into effect had the boy assented. I have used the poultice made in the manner described, as it acts both as a fomentation, and enables you also to apply slight support to the distended and weakened capillaries, over the whole surface. The splint keeps the joint steady and relieves the pain, at the same time that a permanent contraction is prevented by the gradual and steady extension kept up, and the flannel bandage maintains the temperature and gives a uniform support; for it is certain that no restorative process can go on if the natural temperature is reduced, which you will frequently find to be the case in these subjects. The opium greatly allays the general irritation from which they suffer so severely in consequence of continued pain, and is, according to my experience, of the greatest possible advantage.

I have ventured on this digression, because I believe that many legs are lost simply from want of attention to what are often considered trifling details, but which trifling details form, in my opinion, the most important portion of the treatment. By their use I believe that the majority of cases may be saved from the dreadful alternative of the loss of the limb, which, to the poor, whose living must depend on their daily labour, is of infinite importance, far more so than to those whose means place them beyond the necessity for exertion. It has been said that such cases are daily occurring, and occurring in every one's practice. Admitted; but does not this prove that the opinions expressed are incorrect, and if these and others have had the use of their limb restored, there are, in all probability, hundreds who have suffered amputation that might have possessed a useful member? It is an easy matter to take off a leg, but the consequences to the patient exist for life. How often is it said, in similar cases, "we must first get the patient into better health, and then perform amputation." Now I want to know how a patient suffering from this disease in its most severe form can, during the exist-

ence of that disease, and in spite of it, be brought into better health, into such a state of health as will admit of his bearing the operation, and yet the health should not continue to improve, and with proper attention the disease should not be cured also. It is certain, if the severe symptoms I have mentioned be allowed to continue, death must be the result; but until you can prove to me that the disease is, from its nature, incurable (I mean of course in young subjects), I am not prepared to admit either the necessity of amputation, nor that the disease will continue and destroy life, unless that extreme measure is resorted to. Again, supposing the bones themselves diseased, and the integrity of the joint destroyed, what is to prevent the restorative process from going on, and a comparatively useful limb being secured to the patient? We have evidence in abundance of this being effected in the instances of ankylosed joints that present themselves almost daily, of the hip, knee, and elbow. The misfortune is, and what I would particularly draw attention to, that from the comparatively low organized condition of the structure of the joint, the efforts of restoration are proportionally slow, and occupy many months of treatment and, of course, of attention: but what is this compared with the life of the individual, and his being enabled to obtain his subsistence in any capacity he may be placed; whereas, with a wooden leg, no very active employment can be undertaken, for, independently of the appearances it presents, objections naturally arise to the employment of such individuals. My object in making these remarks is solely to attract attention to what appears to me a very much neglected disease, and I believe, in many instances, this arises from an impression that it is a disease, if not incurable, at least so far hopeless that it is useless to waste the health or time of the patients in any attempts at cure. If in these remarks I shall be the means of drawing attention to the subject, and in this way of saving the limbs of patients thus afflicted, whatever may be the opinion entertained, I shall have obtained more than I have any reason in right to expect. The assertion of these views is a bold step, and I am well aware that my motives may and will be questioned, and my opinions disputed. I have, however, a duty to perform in common with all men, and I trust never to be deterred by fear from openly and decidedly stating my opinions, believing conscientiously that they are correct, and believing also that general good may result from them.

In reasoning upon the cases mentioned, as well as upon numerous others which have been left for amputation, but which some fortunate accident has prevented; reasoning,

I repeat, on these condemned limbs, which have ultimately been restored, I feel myself fully justified in suspecting that there are many limbs similarly affected which might, by similar means, be restored, but which are now unhesitatingly doomed to the knife.

The next cause mentioned is one remote from the joint, namely, injuries to the spine, producing, in the first instance, paralysis, upon recovery from which, contraction of the flexors is the result, oftentimes combined with contraction of the gastrocnemius also. In these cases you have, of course, no change in the joint itself, except the change into a permanence of the flexed position, neither is there any alteration in the relative position of the bones. The patients who meet with these severe accidents are confined for a long period to their beds, and after the spinal column has been relieved from the pressure occasioned either by the bone or the effusion of blood or serum, as the muscles recover their lost power, the most powerful, which are the flexors, overcome their weaker antagonists, and a gradual contraction is the result, so that when the patient is allowed to leave the bed, he finds himself unable to straighten his legs, and, if the gastrocnemius is contracted, of placing his feet flat on the ground, the contraction taking place previously to the patient being enabled to exercise any voluntary power. We have had two cases of this description in the charity; the one a man, of whom this is a cast, the other a boy. The man was a bricklayer's labourer, and fell from a scaffold, either fracturing or injuring the spinal column at the lumbar vertebrae; perfect paralysis followed, upon recovery from which contraction of both the knees was the result. The tendons were divided, and the limbs restored to their straight position, and as there was no paralysis of the extensors, free voluntary power followed, and the man left the charity well. The boy was a sailor, and had fallen from the mast of a ship: the same result followed, with the addition, in this case, of contraction of both the gastrocnemii. There was no remaining paralysis in this case, and the boy left the institution walking with tolerable comfort.

In the cases that arise from cerebral disease, or irritation, you will generally find paralysis of the extensors, and contraction, in one or other of the forms mentioned, in the feet, but in these instances, as well as in those just mentioned, no disease or obstacle to the joint itself. There is, however, occasionally some displacement of the articular surface, which, I imagine, arises from the general loss of tone affecting the ligaments, and allowing of their relaxation, when, of course, the tibia becomes displaced, generally outwardly, producing, when the leg is extended, a knock knee.

With this, gentlemen, I conclude the causes; in my next lecture I shall proceed to the treatment. I must, however, apologise for having digressed on the scrofulous diseases of the joint.

ON THE PRESENT STATE OF THERAPEUTICAL INQUIRY.

BY JAMES ARNOTT, M.D.

Physician to the Brighton Dispensary.

[Continued from page 412.]

(For the *London Medical Gazette*.)

THE principal sources of the acknowledged remedies of disease are:—

First, The *observation* of the effects of accidental occurrences or influences on the sick; of the effects of substances or remedial measures used empirically; and of the obvious remedial operations of nature and her instinctive dictates in disease. Secondly, the *analogy* observed to exist, either between diseases, leading to the employment of the same or a similar remedy in each; or between remedies, leading to the advantageous substitution of one for the other. And thirdly, the demand arising from the obvious nature of many diseases for the direct application of remedies acting on purely mechanical or chemical principles. The treatment of fractures, dislocations, herniæ, obstructions of canals, the extraction of foreign bodies, the extraction and change of the properties of poisons by antidotes, the stoppage of hæmorrhage, &c., are examples of remedies proceeding from this source. The appropriate remedies for these diseases are not only suggested by mechanical and chemical science, but such remedies have in many instances been brought to a high degree of perfection by the advancement of these sciences.

The opinion has been very generally entertained, that it is to the deductions from medical theory that we are principally indebted for our most efficient remedies; and it is mostly for the advance of medical theory, that the physiologist and the other zealous students of the collateral sciences above alluded to, prosecute their labours. It may be very true, as already stated, that these labours will be eventually successful in attaining their object; but the history of the medical art would forbid us to expect a very

speedy accomplishment of this; for very few useful practices in disease can be fairly attributed to the deductions of medical theory in the usual sense of the term. Plausible theories have indeed been given in explanation of the action of most of our acknowledged remedies; but it must be well observed, that these have been invented subsequently to, and not before the discovery of the remedy. A remedy, indeed, may be accidentally discovered from its trial having been suggested by an erroneous theory; but if theories are to be allowed the character of utility on this account, it would follow that they would be useful in proportion to their error or absurdity; for they would then be less likely to keep long possession, and by their rapid succession, give greater scope for new trials of medicines. The greater part of our valuable remedies were discovered before physiology was sufficiently advanced to admit of the possibility of correct theory. The circulation of the blood was discovered only two centuries ago.

It is not therefore to medical theory, or the branches of science on which it is built, that we are to look for the speedy advance of therapeutics from the very low condition in which, as we have seen, it still exists, but to the adoption of proper modes of making the above real sources of discovery most available. It may be, with this view, useful to refer to a few examples of discoveries or improvements in medicine proceeding from these sources. In doing so, it will be convenient, and conducive to brevity, to consider in each example the original observations or applications of a remedy, and a subsequent extension of the discovery by analogy.

The great discovery of vaccination (if prophylactics may be classed with remedies) as a perfect security in the vast majority of instances against the contagion of small-pox, originated in the accident of some peasants occupied in milking cows having become affected with cow-pox; and as the discovery of its protective power was really made by the milkers themselves, it is unlikely that a very acute sense of observation was required for it. But it demanded talent and perseverance of the first order, which were found in Jenner, to establish the discovery in

opposition to the prejudices which theory raised against it; for theory in this instance, as in numberless others, instead of promoting, retarded the discovery of truth.

The principle of vaccination has not as yet been extended to other diseases of similar character; and it is extraordinary, considering the importance of the investigation, that the attempts to do so have been so few and so imperfect. The Gloucestershire milkers had observed that, while small-pox was raging where they lived, those amongst them who happened to be affected with cow-pox, or who had lately been so, were safe from the contagion of small-pox. May not the singular immunity which some persons appear to possess from other diseases of the same class arise from their having had their constitutions guarded by analogous means which by patient and extensive inquiry might be ascertained? Would it not be most extraordinary that small-pox should be the only disease which, in a malignant form at least, can be prevented by inoculation either with virus of the same disease, or a modification of this virus, or by the constitution having been previously affected with a totally different disease? Might not a person who appears to enjoy immunity from scarlatina, for instance, have been affected with it under peculiar (and ascertainable) circumstances, so that its existence may have passed unobserved? Could the virus of this terrible disease be modified, as that of small-pox has been, by infecting some species of animal with it? Would mixture with other substances effect a similar change in the virus? Could the human constitution be so temporarily changed by the action of medicine or other causes of this description, previously to exposure to contagion, as that the same beneficial result should follow? It is to be regretted that instead of trying the various new remedies for scarlatina, each ushered before the public with the praise of infallibility, and each found to be as worthless as its predecessor, a thorough investigation should not be made into the means of preventing its occurrence, or at least of assuaging its virulence.

These remarks on scarlatina lead me to the subject of the accidental discovery of a remedy for a disease closely allied to it, and which fell under my

own observation several years ago, while residing at St. Helena. There prevailed at the time an endemic and supposed contagious species of malignant sore throat (diphtherite?) which had, in the majority of instances, resisted all the remedies usually employed in such affections. The wife of a serjeant in the garrison had four of her children labouring under this affection, at the same time that she herself was suffering from some illness for which the surgeon in attendance had in his morning visit prescribed an emetic mixture. It consisted of a strong solution of Tartrate of Antimony, a certain quantity of which was to be taken at intervals until vomiting should be excited. The poor woman, supposing that this mixture had been sent for one of her children, the last attacked with sore throat, not only administered it in the large doses intended for herself, but continued to exhibit it during the day so as to keep up a frequent and severe vomiting. I accompanied her medical attendant in his evening visit, when we found this child in a state of extreme exhaustion, but in all other respects much relieved. It rapidly recovered; and the practice of severe and continued vomiting was adopted during my stay on the island in many subsequent cases of the same disease, with equal success. The same method of treatment has, since the above occurrence, and perfectly independently of it, been resorted to in cases of croup by several practitioners who have recorded their success in the medical journals. In his recently published and excellent lectures, Dr. Watson speaks of it, in conjunction with bleeding, as preferable to any of the usual practices in this disease; and Dr. Cheyne strongly recommended similar treatment (to which he states he had also been led by accident) for what he terms the second stage of croup. I have learned also that severe and continued vomiting was employed by the medical officers of our army in Egypt to arrest the rapidly disorganizing ophthalmia which then prevailed; and it is manifestly applicable to other diseases of the same character, requiring the adoption of prompt and decided measures.

If, as has been asserted, many of the injurious medical practices, which obtain amongst the lower uneducated classes, like the heating regimen in

eruptive fevers, had their origin in erroneous theory, it can, on the other hand, scarcely be doubted that their useful practices originated in accident, and because they were not opposed by erroneous theory. Their mode of treating burns by keeping the affected part near the fire is supposed to have led to Dr. Kentish's plan. But another popular remedy for burns, which was lately mentioned to me, might, had it been duly appreciated, have led at a much earlier period to a great improvement in surgery. A lady related to me that when a girl, and while residing at a farm-house in Kent, her face and neck were by some accident severely scalded. As there was no assistance to be had from any medical practitioner without great delay, her relatives consented to the application of a popular remedy in that part of the country, consisting of a thick plaster of mud taken from some adjoining lane or pool, with which the whole injured surface was covered, and which was retained upon it for several days. When the mud was removed it resembled in its dry state, according to my informant's description, the plaster mask of a bust. The scalded surface rapidly healed under this treatment, and only a slight scar was left on the forehead. Now it is obvious, that this method differed in no material respect from the practice which has been adopted of late years in burns, of covering the injured part with a thick layer of flour, cotton, soap, basilicon, or some other similar substance; each of which has been introduced as a great improvement on preceding plans, but all of which obviously operate upon the same principles, and chiefly, no doubt, by protecting the injured parts from contact with the air.

There are few proceedings in surgery which afford a better illustration of the extension of the preventive or remedy of a disease to analogous diseases, than that of protecting morbid parts from the air.

That the air acts injuriously on diseased surfaces had long been suspected by surgeons; the wonder is that so much time should have been allowed to elapse without settling the question. The ridicule which was thrown on this idea by Mr. John Bell was well calculated to divert the attention of surgeons from the inquiry; and this ridicule might have been more success-

ful had not Bell's doctrines on the subject been opposed by the more authoritative assertions of Abernethy. The expediency of opening lumbar abscess in the manner the latter surgeon recommended, in order to exclude the air, was generally acknowledged, although the danger may in this particular instance have been exaggerated; for it would not be an easy matter for air to penetrate through a narrow and deep channel into the cavity of an abscess, the pliable sides of which are exposed to the pressure of the circumambient atmosphere. The effect of plasters and other dressings to ulcers was a more obvious proof; or the benefit proceeding from the common unctuous applications to burns.

The subcutaneous incision of the tendons in contracted and distorted limbs, an operation which is assuredly one of the greatest modern additions to surgery, has recently sprung from an extension of this principle of excluding the air; and improvement from the same source is probably not yet at an end. There is error surely in so frequently exposing wounds and ulcers to the air, as is generally done by the unnecessary removal of dressings; and these in many cases might be advantageously removed and reapplied while the morbid part is kept immersed in warm water; or the discharge from an ulcerated part may be permitted to escape through a valvular opening in some membrane impervious to air which has been spread over it. If air acts injuriously on healthy surfaces, as has been supposed by many (a question which a few simple experiments would determine) its contact might be prevented during great surgical operations by performing them in a chamber of the form of a large bell, in which the atmospheric air has been replaced by a gas of innocuous quality, the operator and patient being supplied with air for breathing from without. And even granting that atmospheric air does not injure healthy surfaces, it may prove injurious when once admitted into cavities, by remaining in contact with them after the surfaces of these cavities have become diseased.

In a recent number of the *MEDICAL GAZETTE*, I have, in the course of some observations on a case of empyema, suggested two modes of preventing the entrance of air into the cavity of the

pleura in paracentesis, by the adoption of either of which, it may be hoped, the principal danger hitherto attending that operation will be removed.

Amongst the expedients that have operated beneficially in excluding the air, cauterizing the surface by nitrate of silver, a practice highly commended by Mr. Higginbottom, might have been included. But the other remedial agencies of this substance are so great, whether it be applied to the skin or mucous membranes, as to throw this particular effect of it into the shade. These agencies have only lately been duly appreciated; and their extension to the various diseases in which they are employed furnishes another striking illustration of the subject before us. A better proof that we were not led to the employment of lunar caustic in these diseases by any process of reasoning or theory, cannot be adduced, than the fact, that as yet, and after its efficacy in their cure is fully ascertained, no plausible explanation of its *modus operandi* has been afforded. It was probably, when pursuing a practice which I had a little while before introduced in strictures of the urethra, namely lateral cauterization, that M. Lallemand accidentally discovered the advantage of cauterizing the prostatic part of the urethra for the removal of irritation from the ducts entering it; and soon afterwards, and, as he alleges, with the greatest success, he applied the caustic in its solid form to the mucous coat of the bladder in obstinate cases of chronic cystitis. This powerful remedy has now been extended to every accessible part of the mucous membrane; amongst others, to the eye, fauces, vagina, and uterus. Besides its employment in diseases of the œsophagus and rectum, it has, I believe, as respects the gastro-intestinal membrane, been applied by injection to the whole of the larger intestine in cases of chronic dysentery; and even, it may be said (considering the large doses in which it is occasionally administered in the form of pill), locally to the stomach. The pulmonary mucous membrane is less accessible; but even here, in inflammation and ulceration of the upper part of the windpipe, the late Dr. Armstrong recommended its use after laryngotomy. Might it not yet be more extensively applied in disease of the bronchi and lungs? Might it

not, either by itself, or in conjunction with some lighter substance (in order that by this means and agitation it may be suspended in the air), be occasionally drawn into the lungs with the breath?

Many other interesting examples of the accidental or empirical origin of remedies might be adduced did the argument require it; and some which, though we might have been led to them by analogical reasoning, we should scarcely have dared to venture upon, had not we otherwise discovered their utility and safety. In chronic hydrocephalus and empyema, the operation of tapping has been performed accidentally, and with complete success, by a nail penetrating the skull in the first instance, and by some similar accident in the second. The accidental origin of the cure of puerperal convulsions by copious bleeding may be also deemed another example of the kind. It is unnecessary, however, to give further details on this part of the subject; nor shall I enter at all upon the consideration of the well-known cases in which nature has been our instructress; but instead of occupying the reader's attention with what must already be familiar to him, I shall proceed to give a few examples of remedies acting purely on mechanical and chemical principles.

The relief from pain which is experienced immediately on the bursting of an abscess, and which pain has evidently proceeded from the tension of the parts containing the pus, must have led at once to the surgical expedient of opening abscesses. Numberless other surgical operations are founded on the same principle of relieving distension by a division either of the distended and painful substance itself, or of what may unequally restrain the increasing size in morbid parts, and thus probably, by unequal pressure, cause stretching, and pain in some portion of their structure; for pain usually proceeds from the unnatural tension of the nerves pervading the distended tissues. Amongst these surgical operations may be enumerated the division of deep-seated aponeuroses in abscess of the extremities; of the tendinous fascia in whitlow; and of the similar structure in deep-seated abscess, or inflammation over the cranium. Scari-

fication of the gums in teething, of the conjunctiva in ophthalmia and chemosis, and in phlegmonous erysipelas, are remedies of the same class; although in all, the loss of blood that accompanies the operation likewise operates beneficially in the cure. The mode of treating phlegmonous erysipelas by scarification would appear, from an account which I received from an officer of the St. Helena garrison who had been a prisoner there after our unfortunate expedition to Buenos Ayres, to have been a popular remedy in South America before its adoption in Europe. Much of the pain accompanying inflammation may proceed from the distension of the blood-vessels themselves, and so much of it may, perhaps, be directly relieved by this incision.

Although these several operations, or modes of treatment, are so closely allied in principle, this principle has not been generally recognised; and several of them, after long intervals, have been introduced as remedies of a completely novel character. Whether the principle can be farther extended, as to the relief of severe pain in orchitis, and that accompanying the inflammation of gout, &c., remains for future observation.

Approaching in character to this principle of relieving distending parts from a restraining pressure, is the operation of tapping, or puncturing, as practised in diseases of the head, thorax, abdomen, eye, bladder, &c. for the removal of effused serum, pus, blood, or fluids peculiar to the organs. Until lately, diseases affecting the two first-mentioned cavities were allowed to prove fatal when this operation might have restored health; and there are grounds for thinking that the principles may be yet farther extended to effusions within the head. The operation for the removal of effused fluid in this situation has been limited to where it occurs in chronic hydrocephalus, and where there is supposed sanguineous effusion between the skull and the dura mater after external violence. But why not attempt the same thing in the last stage of acute diseases attended with such effusion, and in apoplectic hæmorrhage, when other measures have manifestly proved unavailing, and death rapidly approaches? Even under circumstances where life

would otherwise cease, the circulation of the blood might be continued by artificial respiration until the pressure were removed from the brain either by extracting the effused fluid, or (which might be sufficient in many cases) by removing a portion of the calvaria, and making an opening in the membranes, or even in the unyielding cerebral substance itself*. In most cases of sudden death from apoplexy, there is probably great effusion, and the usual site of this is known. How soon the blood coagulates, and when, after this has occurred, the serum separates from the crassamentum, are points not yet ascertained. Where the slightest hope remained of advantage from other measures, or the curative operations of nature, such a proceeding would, in the present state of our knowledge, be inadmissible; but under other circumstances, as the patient by this time is generally unsusceptible of pain, there does not appear any reason for an absolute prohibition of the attempt. Wounds of the brain are not in themselves so dangerous as might *a priori* have been supposed. The frequency with which the ventricle has been successfully tapped in chronic hydrocephalus, is a proof of this; and still more conclusive is the fact, that persons have recovered after the loss of a considerable portion of the brain. The details of a remarkable case of this description, which occurred a few years ago in the neighbourhood of Brighton, have been recorded in the MEDICAL GAZETTE, for Jan. 1844. There can be little doubt that fungus cerebri (which has frequently been cut off without any bad effect) consists, in many cases, of a portion of the substance of the brain protruded through an ulcerated opening in its investing membrane in consequence of internal hæmorrhage; and to this safety valve in these cases the patient may owe his escape from the suddenly fatal effects of pressure.

This suggestion (which has not the character, assuredly, of either boldness or danger), of extending a principle already in use for relieving the brain from the pressure of an effused fluid,

* "In apoplexy, after the breathing has altogether ceased, it is obvious that life might be prolonged for several hours by artificial inflation of the lungs, but as no ultimate benefit could be derived from such an operation its expediency may fairly be questioned."—*Medical Jurisprudence*, by Paris and Foublanque, Vol. II. p. 22.

whereby, if a permanent cure could not be effected, life and intellect might perhaps in many cases (and with infinite advantage in so sudden a malady as apoplexy,) be protracted, will, I am well aware, find no favour with such members of the profession as were amused with the proposition which I made some twenty years ago to extract urinary calculus without any dangerous cutting; and who, at a later period, ridiculed the idea of saving life by extirpating the diseased ovary.

The benefit that chemistry has conferred on therapeutics, not only by presenting new substances or new combinations, but by pointing out the modes by which articles already in use may be prepared so as best to fulfil the intentions of the prescriber, is too well known to require any comment on the present occasion. Of that to be obtained from mechanics by improving the apparatus employed, a better illustration cannot be adduced than that of the substitution of fluid pressure for the various means hitherto employed to answer the same purposes. By this substitution, not only are the indications of cure more completely carried into effect, thus facilitating the cure, and preventing suffering during its course; but by the superiority of the new means, difficulties in the treatment are surmounted which could not be overcome by former means. Fluid pressure, for example, when applied to the scirrhus breast, from its exciting so little irritation in consequence of the uniformity of its action, and the ease, comparatively, with which it may be controlled, can be continued much longer and less interruptedly than the pressure of the bandage; and from the same qualities, this kind of pressure may often be used as a means of support to weakened parts where bandages are totally inadmissible. As a means of dilatation the advantages of fluid pressure are not less conspicuous, and are well worth obtaining, though at the cost of a little trouble from the complexity of the apparatus, on the part of the surgeon. In the removal of constrictions or narrowings from the larger accessible canals of the body, fluid pressure possesses so much superiority over the whole class of the wedge-acting instruments used in such

cases, as respects speed and completeness of operation as well as safety, that, I doubt not, it will be ere long matter of surprise that so much trouble had been necessary to render general its substitution for these means; and to silence the objections which ignorance, indolence, a prejudice against whatever is new, or even more creditable causes, had raised against it.

NOTE.—One would think that before going into details respecting the action of an instrument used in surgery and denying its advantages over other means, the person so doing would, if he had not actually used the instrument, at least make a point of seeing it. Yet from some observations on the fluid dilator, by Sir Benjamin Brodie, in a recent publication of his, there are grounds for doubting whether he had even this acquaintance with what he criticises, for he states that the fluid dilator must be useless in cases of narrow stricture on account of its bulk, which cannot be supposed to be less, he says, than a middle sized bougie. It is singular that his own description of the instrument, viz. "a tube of varnished silk, which is to be introduced into the stricture, and then dilated by impelling air into it by a syringe," should not have prevented his falling into this error: for it is obvious that such a tube, if rolled upon itself, when covered with adhesive matter, as a sheet of paper or parchment is rolled, or as waxcloth is rolled in the manufacture of the common bougie, cannot be larger than the same piece of cloth rolled into the form of the smallest bougie. But dilators of a size so small as this are seldom required; and that they may be as smooth as possible—as smooth as the mucous membrane of the urethra itself—it is better to cover as well as to line the silk tube by a thin piece of gut.

It is in removing a stricture completely, or to a greater extent at least, and more speedily and with less irritation than can be effected by other means, that the advantage of fluid pressure is most conspicuous. This alleged superiority is disputed by Sir Benjamin, who states, first, that he is not satisfied that bougies cannot dilate to the same extent; and, secondly, that dilatation beyond a certain degree, when effected by bougies, he has found more injurious than useful. To decide the

question of the power of dilatation by the two methods, I would wish nothing more than that both instruments should be seen, or their description and mode of action, at least, clearly understood; and as to the second objection, I would ask if it be logical to compare the action of an instrument which produces much irritation when employed of a large size, (as it must necessarily dilate the whole of the sound, as well as the diseased part of the canal), and whose mode of operation is very different, with that of an instrument which acts on little else than the diseased part? With as much propriety may castor and croton oil be compared together, as the fluid dilator and the bougie; but they surely differ so exceedingly in the degree of irritation which they severally produce, as would make any comparison between them preposterous. But Sir Benjamin Brodie is of opinion that, like the disease of the joints above alluded to, stricture is incurable—that patients with stricture must be patients for life; and he is content therefore with the employment of a palliative means of very inferior description.

If stricture be indeed incurable, if its removal be beyond the power of any mechanism or any medicinal agency addressed to the vitality of the diseased structure, it is a fact much to be lamented; for it is obvious that any long-continued source of irritation in the urethra must eventually have the most pernicious consequences on the contiguous and sympathizing parts—on the prostate gland, bladder, or kidneys. I believe that Sir Benjamin has taken too gloomy a view of the surgery of this department; but even granting that every means of dilatation is but a palliative remedy, surely, as our object is to remove a source of irritation and danger, that which removes it with most expedition, at the least risk to the patient, and to the greatest extent, consistently with this safety, should be preferred.

It is with much pain that I have entered upon this subject, and animadverted on a want of candour and correctness in the reasoning of one who has so long been deemed a high authority in the profession. But when “authority” is used to crush what a prolonged experience has proved to be an

improvement of the highest order, the interests of humanity demand that an inquiry should be made into the grounds on which its judgment is founded. A critic in the *London Medical Journal* (No. 269) spoke of the application of fluid pressure to the diseases of the urethra as constituting a new era in their treatment, and he did not speak without practical experience of its use, for it had been adopted in his own case. How differently does the writer proceed who, granting that he may have seen the instrument, has assuredly never employed it; and yet, from comparing it with what it does not resemble, condemns it!

Having quoted Sir B. Brodie’s imperfect description of the fluid dilator, it may be necessary to mention a few more particulars with regard to its construction and use, in order to prevent any misconception on the subject. When it is merely a tube of varnished silk, and of a size, in its distended state, less than the natural diameter of the urethra, the tube may be of sufficient length to reach from the orifice of the urethra to a little beyond the stricture; and when rolled upon itself in its collapsed state, in order to render it smooth and sufficiently stiff for insertion, it has in every respect the appearance of a wax bougie. It is, in fact, a wax bougie capable of swelling with any desirable degree of power after it has passed within the stricture. Such is one form of the instrument; but that which is usually more convenient consists of a short and smooth dilatable tube, of the required diameter, tied upon the end of a metallic tube, which directs it to the constricted portion of the urethra, and conducts the distending fluid to it. This fluid, consisting of thick mucilage and a portion of air, is gradually introduced, according to the feelings of the patient, until a degree of hardness is produced in the distended membranous tube which no stricture can withstand. The patient may himself regulate the pressure by raising or depressing the screw which moves the piston of the syringe; and on account of the power which a screw piston-rod affords, a syringe capable of holding a large supply of liquid may be used. The fluid dilator, from its smoothness and pliancy, is, in most cases, as easily passed into the stricture

as a common bougie; sometimes, indeed, from its possession of peculiar qualities in this respect, more easily.

Another improvement of means already in use, which I consider to be an accession of considerable importance to therapeutics, from the power which it confers of greatly extending the use of a very valuable remedy, is the mode which I have adopted of applying cold locally to prevent or remove inflammation, hæmorrhage, &c. in a very great variety of cases.

The local application of cold furnishes one of the best examples of a remedy originating in the instinctive dictates of nature; but from the mode in which it has hitherto been made, I doubt whether as much harm has not been produced by it as benefit. The usual mode is to place a rag dipped in cold water, pure or medicated, upon the part, renewing it at intervals according as it becomes heated. This is evidently not a continued application of cold, but a series of changes of temperature, and is likely enough, in many cases, to cause a very prejudicial effect. If ice be substituted, the cold may be too great, and the mischief be increased; and cold affusion, or irrigation, as it has been termed, though often a useful substitute, can only be applied to certain parts of the body, and even to these with much trouble and difficulty. What I have found a perfect mode of applying cold, is to cover the part with a very thin bladder, of the requisite dimensions, containing a small quantity of water of the desired temperature, which is constantly renewed by establishing a current through the bladder by means of two pewter tubes; one connected with a reservoir, and having a stop-cock at its end to regulate the stream; the other leading to a waste vessel. The elevation of the waste-pipe regulates the quantity of water in the bladder; and as, from the change of position of the patient, this elevation must be frequently altered, it is convenient to rest the extremity of the pipe on the sliding ring of a common retort stand.

By this apparatus the temperature can be regulated with the greatest precision, and (when such a test should guide us) water of that temperature can be chosen, whether high or low, which is most agreeable to the patient's feelings. If sudden and severe cold is

desirable, very cold water running rapidly through the bladder will reduce the temperature much more rapidly than the application of ice. Cold and heat can thus be conveniently applied (by fixing the ends of the supply and waste pipes together, and tying them into one end at the bladder) to various internal as well as external parts; the cold, to check hæmorrhage, as in menorrhagia; the heat, to promote the natural discharge of the part, as in amenorrhœa. When used to restrain hæmorrhage, the plugging of the passage by the distended bladder is an important part of the treatment, and is much better adapted for its purpose than the irritating and less manageable expedients hitherto employed.

A modification of this method of applying cold, contrived for the purpose of combining pressure with it, has been used, on my recommendation, and with great advantage, in a case of strangulated hernia. Cold and pressure are each separately of great efficacy in this disease as means of obviating the necessity of a dangerous operation; but when their forces are combined, this object will be accomplished, not only more certainly, but more speedily.

PRACTICAL REMARKS

ON THE VALUE OF THE OPERATION OF PERFORATING THE WALL OF THE CHEST INTO A TUBERCULAR CAVITY,

FOR THE RELIEF OR CURE OF TUBERCULAR
PHTHISIS,

With Comments on the Case of J. G.

By E. O. HOCKEN, M.D.

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SOME months back my attention was directed to the propriety and safety of making a free communication through the wall of the chest with a tubercular cavern in the lung, (as a means of affording relief, or of effecting a cure) by reading some account of a discussion on the subject. Since that period I have learnt that the subject is by no means new, either in theory, or in actual practice; Dr. Barry, of Dublin,* having proposed, and successfully performed the operation more than a cen-

* A Treatise on Consumption of the Lungs. 1726. A Treatise on three different Digestions, &c. 1763.

tury ago. For this information I am indebted to Dr. Hastings. The suggestion appeared to me of considerable value, at the same time that I felt convinced that the operation would be applicable only to certain cases, and that it would almost to a certainty fail in producing a cure, unless at the same time some plan of medical treatment were adopted capable of assisting the curative efforts of nature, and of suspending the further deposition of tubercle, as well as of removing any traces of disease which might exist with the cavern in other parts of the lungs. From careful, and, I trust, perfectly impartial trials of the *medicinal naphtha*,* I was convinced that the profession possessed in it a remedy capable of producing all these results. Impressed with these considerations, I suggested the combination of surgical proceedings with medicinal naphtha, and other remedial measures, in my "Practical Inquiry into the Value of Medicinal Naphtha in Tubercular Phthisis," written about three months since, (September, 1844). In commenting on a case of phthisis with laryngeal disease, I remarked at p. 60, that "naphtha, although it relieved the chest symptoms, exerted no beneficial influence on the laryngeal disease. Supposing such a case to occur, in which auscultation proved that the phthisical state of the lung might be cured, and was already benefited by the treatment, would it not be allowable for the surgeon to perform the operation of tracheotomy, in aid of the curative influence of medicinal measures?"

"In speaking of surgical operations in aid of the physician's attempts to direct the efforts of nature into a proper and healthy channel, I may remark that the operation recently proposed of making a free external communication through the wall of the chest, with a phthisical cavity of large size, replete with morbid secretions, is (if it could be effected safely) likely to render the case more curable, provided the extent of disease present, and the predispo-

sition of the patient, allow the smallest shadow of hope to remain."

At the time this paragraph was written, I imagined that the operation would prove beneficial much in the same way, and on the same principle, that the surgeon gives relief in deep-seated and diffused abscesses; viz., by freely opening up sinuses, and dividing fistulous tracts, in order to allow the secretions of the sac of the abscess to escape freely, and to relieve the irritation produced by the passage of these matters through narrow and circuitous routes. Hence I concluded that it would be more applicable to cases of cavern furnishing the signs of abundant liquid contents, and where a large quantity of muco-purulent matters had to be expectorated through the bronchi; and it was from these considerations that I concluded the opening should be made into the cavern at the most depending position, and, at the same time, at a point where it was most probable from the auscultatory phenomena it was situated nearest to the surface.

In the early part of the month of November, Dr. Hastings informed me that he had a patient in an advanced stage of consumption, who was suffering from the effects of a very large cavity in his left lung, but where the signs of tubercular disease were comparatively slight on the right side; and showed me a letter from the patient (a well-educated intelligent man) stating his willingness to submit to the operation, notwithstanding its risks, provided it held out any reasonable chance of ultimate good. In my conference with Dr. Hastings on the subject, I stated to him the views I entertained, and my willingness to assist him, to the utmost of my power, in carrying these opinions into execution.

On the following morning, I also talked the matter carefully over with my friend Mr. Storks; and it was subsequently arranged by Dr. Hastings, that myself and Mr. Storks should meet him to examine the patient, and decide on the best modes of operating, and the situation to be selected for the opening, on the following Monday. Accordingly, on the 11th of November, I met Dr. Hastings and Mr. Storks, and with them very carefully examined the patient's chest, and fully arranged the steps most likely to be successful in the operation, which was fixed for

* Till recently I feel convinced that scarcely any one has tried the *genuine Medicinal Naphtha*—it being impossible to obtain it (or only as an accident) from any house in London, but at White's, Piccadilly, two doors from the Haymarket. Very recently, Mr. Hooper, of 7, Pall Mall East, has succeeded in discovering where he can obtain a supply. He informed me that, but for an accidental circumstance, he would have searched London over without discovering any druggist who sold the right spirit.

the following Friday. On the 15th, immediately previous to the operation, I again ausculted the patient's chest, and selected (agreeably also to the opinions of Dr. Hastings and Mr. Storks) a spot parallel with the left nipple, at the upper edge of the fourth rib, on a level with, but considerably to the left of the situation of the heart. The operation was then performed by Mr. Storks, and (as an unprejudiced observer) I may be allowed to say, with that skill and dexterity which I have seen him exhibit on several other occasions. Since that event nearly to the present time, I have most closely and carefully watched the case, attending two or three times daily with Dr. Hastings and Mr. Storks; and hence I may be allowed perhaps to make a few comments on the applicability of the operation, and on this particular case (the case of J. G.) referring for minutiae to the report of the daily history, published in the *Med. Gazette*, of Dec. 20th, by Dr. Hastings and Mr. Storks, to the accuracy and impartiality of which I would add my humble testimony.

It appears to me that the comparative condition of the patient's chest immediately previous to the operation, and at the present time, is of considerable importance in judging of the value of the operation. I will therefore mention the signs which were present on the 11th of November, and the state of the chest as it existed on the 17th of December.

11th Nov.—*Physical signs.* Flattening of the antero-superior parts of the left side of the chest, with diminished respiratory play, but with bulging and elevation of the upper intercostal space with each inspiration, and depression with expiration, especially marked in the first and second intercostal spaces; considerable dullness on percussion over the clavicle and over the whole surface from the clavicle as low as the fifth rib: powerful, blowing, cavernous breathing, which seemed to be pulled into and out of the ear, over the dull portions, with complete, reverberating, loud pectoriloquy, unmixed with any moist sounds. These signs were decidedly most superficial over the third intercostal space, parallel with the left nipple. The same signs existed in the left axillary and upper part of the sub-axillary regions, but less loud and superficial. Posteriorly there was con-

siderable dullness over the scapular region, with cavernous breathing and pectoriloquy. Beneath the scapula there was some healthy respiratory murmur, also in the lower part of the sub-axillary region.

Right side anteriorly.—This side possessed the natural amount of prominence, extensive respiratory movements, and a perfectly normal degree of resonance. Respiratory murmurs slightly harsh and bronchial over the sub-clavicular region, especially beneath the sternal half of the clavicle; increased resonance of the voice and heart-sounds, over the same region, quite unmixed with any other moist or dry sounds. Laterally and posteriorly there was no evidence of disease.

Dec. 17th.—*Right side.* This side of the chest yielded a perfectly normal amount of resonance on percussion, and its motions were excellent. The voice was still somewhat bronchial beneath the sternal half of the clavicle, and resonant over the sub-clavicular region near the sternum. The respiratory murmurs were nearly healthy—only slightly harsh—over this region, where they had previously been bronchial, except beneath the sternal half of the clavicle, where there is still some blowing and bronchial sound. In all other parts perfectly healthy.

Left side.—During the progress of the case there has been a gradual process of falling in of the walls of the chest over the cavity, which was, however, much more marked about three weeks since than at present, owing to the great prominence of the clavicle which existed at that time, from the collapse of parts above and beneath it. There was much less intercostal motion than on the previous examination, but the motions of the side in respiration remained the same. The amount of dullness on percussion remained nearly as before, and occupied the same regions, but there was a marked difference in the auscultatory phenomena. The breathing was still cavernous over the upper portions of the left side of the chest, but instead of being noisy and with force, apparently pulled into and out of the ear, as on the examination made previous to the operation it was quiet and gentle, and might have been mistaken by a careless auscultator for healthy breathing, unless the patient breathed more deeply

than natural—indeed, so much so, that one gentleman of deservedly high reputation actually fell into this error on first applying his ear to the chest. The voice, instead of passing directly into the ear with a clear reverberating sound, did not amount to pectoriloquy, but consisted of a loud resonance, but without any articulate sounds passing into the ear. Below, laterally and posteriorly, there was healthy respiratory murmur.

My diagnosis of the case previous to the operation was—a very large empty cavern in the upper part of the left lung—probably occupying the whole of the upper lobe—extending very superficially, especially in front, and evidently in free communication with one or more bronchi: lower portions of the inferior lobe healthy. Some tubercular disease of the upper part of the right lung.

The changes which had been effected between the dates of Nov. 11th and Dec. 17th, were, that the cavity was retained in a state of comparative repose, the walls being no longer powerfully and constantly separated by each inspiration, whilst the little air which was drawn in by a forced inspiration, as in coughing, &c., readily escaped through the tube. From this favourable state of things the size of the cavity had evidently much diminished, (perhaps from the gradual approximation of its walls) and I have little doubt that a process of healing was in progress within the cavity itself: proved, I think, by the adhesions which constantly took place during the progress of the case, between the tube (which passed about an inch and half into the cavity) and the soft parts with which it was in contact. During the dressing of the wound some small masses of organised lymph were several times withdrawn in the extremity of the gum-elastic tube, which had partially obstructed the instrument by stretching across its calibre, between the apertures in its sides. This quiescent state of the cavern, and the diminution of its size, which had evidently taken place, both by approximation of its walls, and a process of healing, fully account for the removal of pectoriloquy, and the great changes effected in the characters of the cavernous respiration. The slight disease present in the right lung was also diminishing and in process of

cure. One gentleman, who has ausculted the patient twice during the last three weeks, imagined that the disease of the right lung was increasing; but on what grounds I am at a loss to conceive. My own examinations of the patient's chest have been made with the greatest care, and coincide fully with the opinion of all those who have similarly examined the patient, with this one exception.

The highly satisfactory state of the general symptoms attest the beneficial changes which have been effected in the local disease; I would especially refer to the number of the respirations in a minute before the operation (32) and subsequently, being at present from 16 to 18 in the minute; also the complete absence of dyspnoea and hectic; and the comparative freedom from cough, as well as from anything but simple mucous expectoration in small quantity; and no discharge, or very trifling, through the tube from the cavity. The pulse also has regained its healthy standard.

These are not the symptoms of advancing disease, but rather those resulting from a complete relief of the constitutional and local irritation, which had previously worn down the system, and were hurrying the patient to the grave. So far from any proof of advancing disease, the chest symptoms become daily more favourable, and the patient gains flesh, health, and strength. These remarks lead me naturally to speak of the

Manner in which the operation proves beneficial—I have already mentioned the manner in which I believed the operation would act beneficially before I attended the case of J. G.; since that time, however, my views have undergone some modifications, which I think of considerable importance in practice. My former opinion was, that the great objects of the operation were to allow the secretions of the cavern to escape freely, and thus to prevent any accumulation in the diseased lung, and give relief to that irritation which is produced by the passage of such matters through narrow and circuitous routes. Hence I imagined the opening ought to be made in the most depending position.

My present belief is, that when a free communication is formed with a cavern through the wall of the chest, a new

action is produced in the sides of the cavity, of a healthy or reparative nature—totally opposed to the diseased conditions which previously existed, and which tended only to the increase of the complaint and to the death of the patient. The presence of the previously unhealthy action in the cavern is manifested in the severe local and constitutional irritation which exists: producing in the first instance cough, more or less unhealthy muco-purulent secretion (which in the case of J. G. was expectorated as fast as it was formed, amounting to about 3ij. daily), constant dyspnoea and breathlessness, with a necessity for frequent respiration; in the second giving rise to a state of severe hectic, rapidity of pulse, great emaciation, and complete loss of strength, &c. Consumptive patients rarely die from the actual amount of disease present not leaving a sufficiency of lung to carry on life, but from the amount of irritation which that disease occasions, wearing down the vital resistance, and hurrying the patient to an untimely grave. As soon as the operation is performed in a judiciously selected patient, this state of irritation, which, in the stage of cavern, is the *fons et origo mali*, is removed, (vide the case of J. G.): the cough, dyspnoea, expectoration, and frequent respiration are relieved, and altered in character—for the cavern either secretes nothing, or mucus in very diminished quantities. In like manner also the constitutional symptoms: the pulse falls to its healthy standard; the hectic disappears, and as the patient recovers from the immediate effects of the operation (unless any accidental circumstances keep him back), he gains flesh, appetite, and strength, with a due performance of the functions, and with the feelings of health.

The manner in which this healthy action is induced in the cavern by making an opening into it through the wall of the chest, may probably be explained on the same principle that accounts for the cure of some forms of laryngeal disease acute or chronic. As long as the larynx performs its functions in respiration it forms a highly important part in the economy, and is more or less constantly disturbed by the ingress and egress of air. If under these circumstances disease be set up in the organ, there is that amount of irri-

tation present which will prove sufficient to keep up and increase it—so as generally to set medicine at defiance—and ultimately, either in a very short or a longer period, prove the cause of death, or be cured by the operation of tracheotomy. By this operation the larynx is cut off from performing any important office in the economy, and is placed in a state of quiet; inducing immediately a complete change in the character of its diseases, which become as curable and as unimportant as a similar disease would be in the mouth, or in any other non-vital part of the body. So, in like manner, the tubercular disease in phthisis is situated in a vital organ of the highest importance, and the cavern is subject to constant disturbance in the respiratory movements, and from the ingress and egress of air. By making a free opening into any part of this cavern through the wall of the chest, it is cut off from performing any part of the respiratory functions; its sympathetic relations with the rest of the system are completely altered (having just the same amount of sympathetic relation with the constitution as such disease would have if situated in a non-vital part), the diseased parts are placed in a state of comparative rest, and the tubercular cavity becomes as curable as it would be if situated in any part of little importance in the economy.

[To be continued.]

RECORD OF CASES.

By THOMAS MAYO, M.D. F.R.S.

Physician to the Infirmary of St. Marylebone.

[Continued from p. 354.]

(For the London Medical Gazette).

JULIA HUNTER, aged 39, was admitted into the Infirmary April 15th, 1844, having had a cough for two weeks, and occasional hæmoptysis in that time. She had been confined eleven months before, and had suckled her infant up to the last two months. She was fair, of average stoutness, and apparent strength. The pulse was small; the skin cool; the dyspnoea considerable. Mucous crepitation was extensively diffused through the lungs, (the expansion of the ribs was on both sides defective), in spite of which much ve-

sicular breathing was audible; no marked dulness; the sputa mucous, not frothy, containing occasionally dark lumps of blood. Such was the character of the pulmonary symptoms throughout this illness. It appeared that she had not menstruated since her confinement. The bowels were easily kept open. She was ordered the Mist. Antimonial. c. Vin. Ipecac. ℥xv. 6tis., the Pil. Hyd. Chlorid. Antimon. et Opii 8vis., horis and was cupped ad 3vijj. inter scapulas.

April 20th.—Shooting pain of head, and heaviness, which, she says, have existed some time, are increasing; the breathing is better.

Hirud. vj. temporibus. Pil. Hyd. Chlor. Antimon. sine Opio, ter.

23d.—This morning she had become suddenly insensible; she was very purple, and foamed at the mouth; this state of insensibility continuing to the evening, with three intermediate fits. She was cupped ad 3vijj., since which I found, on the 24th, that no paroxysm had recurred. She was then breathing easily, and consciousness had returned.

Hirud. vj. vertici raso, et post hirud. Emp. Lyttæ.

27th.—Consciousness had entirely returned; some pain and weight of head still complained of, chiefly in the forehead. Tongue moist; bowels open; countenance composed.

Whatever pain the patient complained of in the thorax was on the left side, below the inferior edge of the scapula; on this side she was generally unable to lie, and on this side also the crepitus above mentioned was most marked. For pain and dyspnœa referred thither, she was cupped on the 29th ad 3vijj.

30th.—She expressed herself relieved principally in the head; but then, and frequently afterwards, complained of excessive hunger. The pulse was small; more vesicularity on the left side than before. She went on with little change to May 16th. The powders of Calomel and Pulv. Antim. continued as above, and the bowels kept gently open. On that day she became delirious, and was cupped ad 3x. temporibus.

May 18th.—Pulse still sharp and oppressed. Hirud. x. dorso.

19th.—Relieved by leeches; had

some sensations as of approaching catamenia.

Lactis, 3vj.; Sp. Ammoniac. C. 5ij. pro injectione utend.

22d.—Head better; no increase of the above sensations of approaching catamenia. Let the injection be discontinued.

June 1st.—I note that the breathing on the two sides is now nearly equal; both crepitous in parts, but vesicular penetration in both increased. Urine not deficient; legs and thighs becoming œdematous.

Sumat Hyd. Chlorid. gr. iij.; Scillœ Bulb. gr. ij. M.

Omittat. pulv. olim præscript.

6th.—Mouth affected.

Sumat pil. Scillæ C. bis. Omisso Hydr. Chlorid.

11th.—Œdema increasing; dyspnœa and pain diminishing.

16th.—Less well; delirious; sudden and violent exclamations of fear; rapid breathing, which is rough, crepitous, and excited under left scapula; sputa muco-purulent.

Cucurb. cruentæ nuchæ ad 3vijj. Hyd. Chlorid. gr. iij. h. s.

18th.—Delirium has ceased, but sharp pain in the temples is complained of.

From this time to the death of the patient, which occurred September 3d, under symptoms of extensive sphacelation in the legs, dyspnœa; and latterly orthopnœa, pain, and oppression of the head, with delirium and pain on the left side of the thorax returned with intervals of comparative ease; the head symptoms less severe than at first. The failing powers of the patient made the abstraction of blood now hazardous, and she found considerable relief of dyspnœa from enemata containing Sp. Terebinthin. given under exacerbations. As a remedy which, during the last month of her life, contributed much to the patient's comfort, I may mention the following:—

R. Misturæ Tragacanth. 3iss.; Potassæ Acetat. 3ss.; Vin. Colchici, ℥x.; Træ. Cardamom. C. 3j. 8vis horis sumpt.

Autopsy.—Brain normal, except a small portion of a rusty colour, but not softened, in the right corpus striatum.

Both lungs adherent to pleura; the left lung universally; both extensively

engouées, of a dark red colour; some small portions in a state of red hepatization. Heart everywhere adherent to pericardium; the walls of the left ventricle hypertrophied (concentrically); valves normal, except in some small vegetations near the edge of the mitral.

The kidneys were atrophied and granular. Other organs healthy.

To my notes on the above case I must add, that the orthopnea therein mentioned towards its conclusion, existed during the whole of it, though increased near its close; and that by subsequent inquiries from the patient's husband, I learned that she was not known to have ever had any rheumatic attack; but that for four years she had been an ailing woman, with what was called asthma. This would lead us to suppose that the pericardial inflammation, as also that of the other serous membrane, neither of them recent in character, was connected with the granular degeneration of the kidney. It would appear that, in spite of this state, she became pregnant, was confined, and nursed her infant for nine months; and finally sunk from the effects of a catarrhal affection, which, in the embarrassed state of her circulation, she was unable to shake off. The whole case affords at least an interesting illustration of the capacity for living often exhibited under severe structural disease.

I have no record of the phenomena the heart itself during the progress of this case.

The statement of the appearances on dissection was furnished me by Dr. Boyd.

[To be continued.]

ABSENCE OF A PORTION OF THE BRAIN.

To the Editor of the Medical Gazette.

SIR,

I SHALL feel obliged by the insertion of a few notes of a case that recently came under my notice, and which seems to me to have some bearing upon the subject of Mr. Solly's communication, at page 245 of the present volume of the *GAZETTE*.

Mrs. W.'s infant was born Nov. 20, 1843, and seemed to thrive very well

until the beginning of February, 1844, when it was seized with a violent convulsive fit, which continued a considerable time. Similar fits, of shorter duration, recurred again during the rest of its life, several times daily, with intervals of apparently natural sleep. They seldom came on during the night. No determination to the head, or plethoric condition of the system, existed; the child sucked well, grew, and in fact seemed quite well, with the exception of these attacks, and a rather obstinate constipation. No means that I tried seemed to have any effect in reducing the number of the fits, although the movements of the limbs were sometimes less violent at times; and other advisers, whom the mother afterwards sought, were as unsuccessful.

I saw the child again in July, when it was plump, and as well grown as it should be for its age, except that its chest was very narrow. It continued to suck well. The mother states it neither does, or ever has taken any notice whatever, even when tried with the other children. She doubts if it sees, as a brilliant light produces no dazzling effect upon it. No teeth have appeared. The convulsions continue as before, sometimes with less, sometimes with greater frequency; the child sleeping tranquilly in the interim.

The child died Nov. 16th. For a month or two previously, the attacks of convulsions had diminished in number greatly, and for the last fortnight had disappeared, being replaced, however, first, by a constant restlessness, and afterwards by a comatose state. During the last few weeks it had become much emaciated, and the left eye projected considerably from its socket. Two teeth only had been cut. From the day of its birth to that of its death, the child, even when quite awake, and apparently perfectly easy and well, manifested no sign whatever of recognizing persons or objects.

I examined the head twenty-four hours after death, assisted by Mr. J. Griffith, of University College. Upon removing the skull-cap, the vessels were observed considerably engorged, and upon the division of the membranes a considerable quantity of fluid escaped. The source of this was not at first obvious; but as the incision into the dura mater was made near the point

where the two hemispheres come into contact, I doubt not it followed their separation. In fact, upon stretching them asunder, we looked at once into the cavities of the ventricles, the corpus callosum, septum lucidum, and fornix, being absent, with the exception of two narrow slips of the first named portion, a few lines in breadth, stretching between the anterior portions of each hemisphere. Just anterior to the corpora quadrigemina, lying in a small cavity large enough to contain the tip of the little finger, was an hydatid, about the size of a small hazel-nut, having much smaller ones adhering to it, and filled with a gelatinous fluid. The optic nerves were remarkably small throughout their whole course, and the tubercula quadrigemina were much smaller than ordinary. A small quantity of fluid only was found in the ventricles. The cerebral substance was not injected, but most remarkably firm upon incision; while the medulla oblongata and superior portion of the medulla spinalis cut just like a piece of cartilage.—I am, sir,

Your obedient servant,

JOHN CHATTO.

Great Coram Street,
Dec. 30, 1844.

ANALYSES AND NOTICES OF BOOKS.

“L’auteur se tue à allonger ce que le lecteur se tue à abréger.”—D’ALEMBERT.

Medical Report of the Case of Miss H—M—. By T. M. GREENHOW, Fellow of the Royal College of Surgeons of England; Senior Surgeon to the Newcastle-upon-Tyne Infirmary, and Eye Infirmary. 8vo.

LORD BYRON says “time at last sets all things even.” The adage seems to hold good with respect to the human uterus, judging from Mr. Greenhow’s very clear and rational statement of the case of Miss H—M—, published with the entire concurrence of the patient.

“In a letter from Venice, dated June 14, 1839, Miss H. M., æt. 37, first communicated to me her early feelings of indisposition. During the preceding year she had been sensible of a ‘great failure of nerve and spirits, and of strength.’ Frequently she experienced sharp pain in the uterine region. The catamenia became more frequent,

occurring every two or three weeks; and a very irritating discharge, of a brown or yellowish colour, took place in the intervals.

“The irregular uterine discharges continued, occasionally mixed with clotted blood, and she suffered from many distressing nervous symptoms, evidently arising from uterine irritation; ‘inability to stand or walk, aching and weariness of the back, extending down the legs to the heels;’ ‘tenderness and pain, on pressure, in the left groin, extending by the hip to the back. The spirits became much depressed, and the power of enjoyment was gone.’ At the same time, ‘a membranous substance, like the end of a little finger,’ was discovered projecting from the os uteri.”

It would appear from the extract of a letter dated Lucerne, July 6, 1839, that retroversion of the uterus had taken place about that period. At the end of the same month Miss H. M. arrived in Newcastle, and placed herself under Mr. Greenhow’s care, labouring under symptoms referrible to some organic or functional derangement of the uterus. On examination that organ “was found large, retroverted, and fixed low down in the vagina, the os and cervix uteri occupying the anterior part of the cavity, and the body and fundus of the organ passing horizontally backwards, till the latter approached the sacrum. The enlarged uterus thus occupying the antero-posterior diameter of the pelvis, pressed, respectively, against the urethra and neck of the bladder and the lower part of the rectum; and the embarrassment occasioned by this pressure produced corresponding symptoms, which were often the occasion of great uneasiness and inconvenience. While the fundus uteri extended backwards towards the sacrum, the cervix was bent downwards behind the pubes, nearly at a right angle, and hanging from the lip was a small polypus, which was soon removed; but without any alleviation of symptoms.”

Ere long the patient began to suffer from oppressive sickness, frequently amounting to retching, together with much difficulty in micturition and in emptying the bowels, occasioned by the pressure of the uterine tumours, as also from distressing pains down the lower extremities, frequently extending to the heels. “The abdomen became con-

siderably distended during the progress of these symptoms; but this arose more from a general distension and fulness of the bowels, from flatus and other contents, than the enlargement of the uterus, which could never be felt rising above the brim of the pelvis: though its increased size, doubtless, by pushing the abdominal viscera upwards, tended in some measure to produce a general enlargement of the figure.

"It not unfrequently happened, although, by the use of gentle aperients or emollient injections, a pretty regular action of the bowels was secured, that a gradual accumulation of their contents took place, giving rise to increased distress; which required the use of more active purgatives for its relief." * * *

"The constant and distressing aching in the back rendered it painful to rest upon the sacrum in reclining upon the sofa; and some relief was obtained by resting in a prone position. A couch, contrived for this purpose, was found a source of much comfort to the patient."

In September, 1841, Sir Charles M. Clark, after a very careful investigation of the case, gave the following opinion—"It was my intention, to say that I perfectly agreed with you as to the nature of the complaint, that the disease was an enlargement of the body of the uterus; that the neck of that organ was perfectly healthy; that although the majority of these cases of enlargement of the body of the uterus did not yield to external applications or to internal remedies, that, nevertheless, the disorder produced mechanical symptoms only, and *did not lead to any fatal result*, to which termination disease of the *neck* of the uterus did lead.

"Farther, I mentioned that in an instance or two I *had* known such complaints as Miss M.'s subside, and that I would suggest the employment of certain means for this desirable purpose."

The means proposed by Sir C. M. Clark was the continued external use of iodine ointment, to this the patient objected: but was prevailed upon to take iodide of iron, in the use of which she persevered, with the exception of a few short intervals, until July or August, 1844. By this medicine the distressing sickness was greatly mitigated, the appetite improved, some morbid feelings were alleviated, and an increased tone of general bodily health as well as of

mental energy showed itself, as may be inferred from the following extract from a note written in September, 1843:—"I suppose I owe my much improved comfort mainly to them (the pills of iodide of iron); indeed it is very great. The pulling and sinking—the mechanical troubles as one may call them—of course continue, but the almost total absence of sickness, and the striking lessening of the 'distress,' are such a comfort to me!"

On the 2d of April, 1844, Mr. Greenhow was first enabled to detect a slight change in the condition of the uterus. The attachment of the fundus was less fixed, and it could be slightly raised from its position. A membranous pedicle, which protruded from the interior of the uterus, but unattached to the neck, previously discovered, could still be felt, and the general position of the organ remained as before.

"In the beginning of June, Miss M. suffered much from an attack of indigestion, with disordered and loaded bowels. The symptoms proper to the organic affection, especially the distressing pain in the back, were for a time increased; and while proper means were resorted to for the correction of visceral derangement, a plaster with belladonna was applied to the sacral region, from which but slight relief was obtained. The unwonted symptoms of indisposition had subsided, when, on June 22d, the mesmeric treatment was commenced, of which a full account has been published in the *Athenæum* by Miss M. From this time she ceased to be properly under my care, though her accustomed remedies were not yet laid aside. I shall therefore pass over the interval till September 4th, on which day I carefully repeated my examination, and found, as on April 2d, that the posterior connections of the uterus were less fixed than formerly. The retroversion continues, but the fundus, which rests against the rectum and sacrum, feels looser, and admits of being raised to some extent with the finger in vaginam.

"The uterus feels altogether less firm, and more yielding in its substance, and the os uteri is to a certain extent dilatable, yielding to the finger in a slight degree more than formerly. Within, and slightly projecting from the os uteri, can be felt *two* substances, which convey to the finger a sensation

as if two lumbrici, of moderate size, hung through the mouth of the uterus. These membranous projecting bodies are said, on pressure, occasionally to exude a reddish discharge. In addition to the knowledge obtained by this examination, Miss M. supplied me with the following reports of herself, at this and several succeeding visits which I made her, previous to the next and final examination into the pathological condition of the uterus, on December 6th. On this day (September 4th), she informed me that the catamenia, which for many years had taken place at shorter intervals than natural, every two or three weeks) have resumed their natural course. That the breasts have increased in bulk. The pills of Iodide of Iron, all aperients, have been discontinued, the bowels having lately acted with ease and regularity. The use of opiates has been greatly diminished by Enema, and internally, altogether omitted. The sickness and other gastric inconveniences have ceased; the irritation in the rectum and neck of the bladder are no longer complained of;—quietude and repose have succeeded to restlessness and irritability; and the nervous system has acquired a greatly improved tone.”

Progressive amelioration took place. Upon the 6th of December another examination was made. “The fundus uteri is more disengaged than at the last examination, and admits of being raised somewhat higher. It is certainly *less fixed*, and in this respect has improved at each time of examination since April 2d, when the first degree of improvement was observed. The retroversion continues, the fundus still extending towards the sacrum, while the os uteri approaches the pubes—the organ remains large and firm, and is yet turned back nearly at a right angle from the cervix uteri. The two membranous pedicles remain hanging out of the os uteri, as at the last examination.”

The health is represented as quite good, and the catamenia as regular, the nervous pains and irritation having all subsided. Knowing well that no symptoms of malignant disease of the affected organ existed, Mr. Greenhow always believed that a time would arrive when his patient would be relieved of most of her distressing symptoms, and released from her long continued

confinement; that some day, probably before long, would arrive when Miss M. should take up her bed and walk.

As regards the pathology of the case, the experienced practitioner will conclude “that the condition of the uterus in December is but the natural sequel of progressive improvement begun in, or antecedent to, the month of April; and as regards the relief from the distressing nervous symptoms connected therewith, that the time had arrived when a new and powerful stimulus only was required, to enable the enthusiastic mind of my patient to shake them off.

“After bestowing my best consideration on the subject, this is the conclusion which most strongly forces itself upon my own mind.”

Galvanism, applied to the Treatment of Uterine Hemorrhage. By THOMAS RADFORD, M.D. Fellow of the Royal College of Physicians of Edinburgh, Member of the Royal College of Surgeons of England, Consulting Physician to the Manchester and Salford Lying-in Hospital, &c. &c. 1844.

DR. RADFORD, of Manchester, has ingeniously applied galvanism to obstetric practice. Being called in consultation to a case of frightful internal hæmorrhage during labour, attended with extreme exhaustion, and where the os uteri was so rigid that the advocates for delivery could not have acted without lacerating the os and cervix uteri, the author ascertained that galvanism produces an effective and powerful contraction of the uterus; and not only so as regards its tonic contraction, but that it has also the power of energetically exerting alternate contraction when applied at intervals.

“The alternate contraction excited by this agent is analogous to, and as powerful as, that which is observed in normal labour, and the tonic contraction is greater. I shall not relate cases in detail, because it would occupy too much time; but I may state that I applied galvanism in a case where the membranes were unruptured, and the membranes in a state of great inertia, and alternate contraction was immediately produced. Before this the membranes were very flaccid; but as soon as the galvanic circle was completed, they became extremely tense, and pro-

truded low down into the vagina; and this state of tension did not subside when the alternate contraction ceased, as is observed in some degree in normal labour; for although the galvanic conductors were removed, so great a degree of tonic contraction of the uterus had been induced that this membranous bag could not collapse.

"I am thus satisfied that by the application of this means we can induce such a state of tonic contraction in the uterus, that, in these extreme cases of exhaustion from hæmorrhage, the woman may be placed in such a state of safety, that delivery may be postponed until a time arrives when it can be safely accomplished, and in the meantime we can have recourse to those measures which tend to raise the vital powers."

As the evacuation of the uterus in cases of placental pre-entation, whether that evacuation be partial or entire, always proves an additional source of exhaustion, Dr. Radford considers that it would be an important point of practice to draw off the liquor amnii *gradually* as the first step in the management of the case. "For this purpose I have somewhat modified Mr. Holmes' instrument for perforating the membranes, making the canula much larger, and having an oval aperture placed on each side near its open extremity. The entire instrument consists of a canula and trocar, which latter always lies concealed within the canula, by means of a spiral spring, except when pushed out by pressure on its button-like extremity. This trocar can be entirely withdrawn from the canula; so as to leave the latter free for the passage of fluid. Now I propose to pass this instrument through the placenta into the amniotic bag, and then remove the trocar, so that the liquor amnii may escape: a plan which I prefer to rupturing the membranes at the side of the placenta, because the water in the latter case would flow too rapidly, on account of the practitioner not being able to limit the size of the opening he might make; and also because by the plan now recommended, the integrity of the membranes being preserved, the placenta is thereby maintained in a better position for acting as a tampon against the open venous apertures when the head comes to press upon it.

"In rupturing the membranes in the

ordinary method, it is quite obvious that as the connection between the membranes and placenta is broken, the latter is liable to fall down more or less into the vagina. Having thus drawn off the liquor amnii, the next step will be to introduce the hand into the vagina, then to pass the fingers to the edge of the placenta, and carrying them on between it and the os uteri, to sweep the hand round its whole circumference, so as completely to detach the placental mass, care being taken to avoid rupturing the membranes." He now resorts to galvanism, in order to secure uterine contraction, and the subsequent management of the case must be conducted on ordinary principles, such as supporting the woman by stimulants, nutritious articles of diet, and transfusion.

Although Dr. Radford has confined his remarks to the treatment of those cases of hæmorrhage which are attended with exhaustion before delivery, he believes that there are others to which galvanism is equally applicable; as for instance those of accidental hæmorrhage before delivery, where artificial rupture of the membranes has not succeeded in arresting the flux, and some of the hæmorrhages of the early months of pregnancy; wherever, in fact, atony of the uterus is the principal feature of the accident.

The apparatus employed by the author "consists of a battery in a small jar, and a helix with conductors. For the sake of convenience, the latter are connected with the helix by means of long wires, covered with an isolating material. The strength of the shock is regulated by a small contrivance situated on the stand of the helix, by means of which it can be either diminished or increased. One of the conductors, which is applied externally, has a hollow wooden handle, through which passes the wire before alluded to, in order to join a brass stem terminating at its extremity in a ball. The other conductor, which is contrived by himself, consists of a strong brass stem, seven inches long, curved to suit the vagina, and covered with a non-conducting material, having a small screw at its distal extremity for attaching to it a silvered ball; at its other extremity it is received within an ebony handle, which is hollow, and through which passes a strong brass wire, looped at the

end, and connected with the long wires before alluded to. This wire is kept disconnected from the brass stem by means of a spiral spring concealed within the ebony handle. The loop is covered with silk, and is intended for the thumb of the operator, when he is bringing the wire into connection with the stem.

"When the remedy is applied, the brass ball of the vaginal conductor is to be passed up to the os uteri, and moved about at intervals on to various parts of this organ. At the same time the other conductor must be applied to the abdominal parietes over the fundus uteri. Shocks may also be passed transversely through the uterus by simultaneously applying the conductor on each side of the belly.

"The application should be used at intervals, so as to approximate in its effects as nearly as possible to the natural pains. It may be continued until it meets the exigencies of the case."

We recommend a perusal of the above lecture to all practitioners engaged in midwifery.

MEDICAL GAZETTE.

Friday, January 10, 1845.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medice* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

HOW IS QUACKERY TO BE REMEDIED?

THE prevailing cry at present is, Down with quackery. A large number of medical men throughout the country are loudly calling out, like the silver-smiths of Ephesus, "this our craft is in danger," unless Government step in and prevent all unqualified persons from practising physic or surgery. They seem impressed with a belief that no act of the Legislature will meliorate the condition of the profession, except this end be attained; and that it can only be attained by penal measures of the most stringent description. Now, as far as overt quackery is concerned,

we entertain a directly opposite opinion. No Government, whether despotic or democratic, can put it down by any such means. It forms a sort of fungous excrescence upon the *body medical*, which, the more it is interfered with the ranker it becomes. There is a principle in human nature favourable to its growth. The patient stricken with incurable disease, like a drowning man, catches at every twig, and lends a willing ear to the boastful pretensions of any mountebank who proffers relief. Love of life in the one, and of money in the other, says Sir Richard Steele, creates a good correspondence between them.

By way of illustration, let us consider what was the effect of imposing legal restraints in ecclesiastical matters, with the view of repressing what the ruling party looked upon as irregular practice there? Did not the rigorous methods taken to destroy obnoxious separatists, as the nonconformists were styled at the beginning of the 17th century, serve only to extend and strengthen their cause? Again, about the middle of the same century, were not the quakers oppressed with fines, imprisonment, and spoiling of goods; and yet, undismayed by these severities, did they not rapidly increase and spread themselves over the kingdom? Now we are convinced, although the analogy is somewhat strained, that the very same thing will hold good with respect to empiricism in the healing art. In proportion as attention is called to it by persecution, so will it flourish.

What really can the state achieve in such cases by legal coercion, when chartered bodies like the College of Physicians and the Society of Apothecaries, invested with ample powers for the protection of their vital interests, have signally failed in turning them to good account. Indeed, as we are told

in an elaborate article on Medical Reform, in the last number of the Edinburgh Review, "the experience of the London College of Physicians tends to establish three principles in medical legislation : first, that quackery is not to be put down by direct penal enactments ; secondly, that the power of inflicting direct penalties for irregular practice is apt to be perverted and applied against nominal or technical irregularity merely, instead of real ignorance ; and thirdly, that uncontrolled powers cannot be safely entrusted even to the most enlightened medical corporations" : p. 243.

But it may be asked, is there no means of abating this evil, of preventing the illiterate and ignorant from trespassing on the domain of the regular professional man ? Assuredly there is, and it ought to be afforded. We are persuaded that if the restrictive clause in the draft of the bill now before parliament be somewhat extended and more distinctly defined, it will answer every purpose, and no party will have any right to complain. By that clause it is enacted that whoever pretends to be a registered practitioner when he is not so, shall be deemed guilty of a misdemeanour, and punished by fine and imprisonment ; and we understand it is farther intended that no unregistered person shall be allowed to assume any one of the names or titles by which registered practitioners are distinguished. Now we conceive that this will exercise so far a most salutary influence. It will enable the public to discriminate whom they may entrust with their health and lives, and whom they may no trust, save at their own peril.

An esteemed contemporary has proposed "limiting the right of treating diseases in *private houses*, as well as in public institutions, to registered practitioners." We do not see in the present

state of society how this desirable object could be well accomplished.

One thing, however, is certain, namely, that some means must be put in force for restraining the chemist and druggist from officiating in the treatment of disease, and in reference to this we would crave an extension of the above clause. We believe that among the underlings of that body there is many "a boastful pretender to medical skill which he does not possess," ready upon all occasions to volunteer his services, whereby "every now and then the patient may lose his sight from an ill-treated ophthalmia, or his life from an inflammation of his lungs neglected in the beginning*." Common justice demands that the poor should not be left at the mercy of persons of this stamp, or that the qualified practitioner should be tricked out of his fair emolument by such unlawful courses. Were the chemist and druggist strictly confined to the duties of his calling, the preparing, compounding, and dispensing of physic, as we know to be the wish of the leading members of the Pharmaceutical Society, and as is the case in France and Germany, the mischief would work its own cure. There has been, and always will be, a certain amount of counter-practice, but this is shunned as much as possible by all respectable venders of drugs, and is not, we understand, upon the increase.

We need not impress upon our professional brethren that in the redress of the above grievance a vast deal depends upon themselves. They must eschew every semblance of quackery and mercenary dealing. Let it be no longer imputed to them as a scandal that "physic is ordered rather to make a long bill than a quick cure." Surely the man who issues from his arsenal twelve gross of draughts in one day, is just as reprehensible as the homœo-

* Quarterly Review, December 1844, p. 11.

pathic doctor who doles out his globules of sugar of milk by infinitesimal instalments. We strongly suspect that the wholesale system of drugging formerly pursued in England, has tended most materially to foster the evil in question; for many a one who had little or no faith in the abilities of a quack, applied to him simply because he seemed willing to sell health at a reasonable profit.

ABSTRACT OF THE MOST MATERIAL FACTS
OF THE
CONTROVERSY BETWEEN DR. LEE,
OF LONDON, AND DR. PATERSON,
OF LEITH.

To the Editor of the Medical Gazette.

SIR,

HAD the late controversy between Dr. Robert Lee and Dr. Paterson, of Leith, involved nothing more important than the honour of the parties concerned, it might perhaps have been unnecessary to trouble you and your readers further with the subject. But to me it seems that the reputation of our profession with the public, and the most sacred interests of society, are at stake. There are some over-zealous members of the medical body, who would make questions of physic matters of certainty, who would lay down laws of unerring and unexceptionable application. Such persons are generally found, as in the present instance, to pin their faith on some fact, circumstance, or symptom, to which they attach a particular meaning. This is all very harmless, when the erroneous opinion in question has no more important application than the undue vogue of a trifling remedy. It may then fairly await the correcting hand of time, the failure of its bloated promises and the progress of science, which will full surely set aside crude and trifling fancies. But an ill-digested hypothesis assumes a very different degree of importance, when the honour of women, the cause of justice, and the interests of mankind, hang upon its decision. It becomes necessary then to check the overweening confidence of such zealots in the absolute truth of their crotchety doctrines, that our great and noble art of medicine may not be held up to the derision and indignation of mankind, that judicial errors of the worst description may not be perpetrated, and that the land may not be filled with hapless families, bewailing the lost reputation of mothers sacrificed to the ill established

medical opinion of what is a true corpus luteum and what a false. These feelings irresistibly crowded upon me as I read the controversy between Dr. Lee and Dr. Paterson, and, under their influence, I made a short abstract of the whole matter, which seemed to me necessary, as the principal facts are by no means clearly put by the parties concerned. I send it to you in the hope that it may appear of sufficient interest to deserve a place in your next number.

A PHYSICIAN.

London, Jan. 6th, 1845.

A poor woman was murdered by her husband at Edinburgh, in the year 1840. Soon afterwards, Dr. Paterson published in the Edinburgh Medical and Surgical Journal, an account of the circumstances, and stated that he had found a true corpus luteum, the result of impregnation, in the ovary, and a deciduous membrane in the womb.

Based on these facts, Dr. Paterson drew the conclusion that this poor woman was an adulteress.

Dr. Lee, commenting on Dr. Paterson's statement, denied strongly the fact, or the opinion that the appearance in the ovary was a true corpus luteum, insisting that it was only an extravasation of blood, and that membranes like the decidua were often found in the uterus without impregnation.

In the month of May last, Dr. Lee received a letter from Dr. Bowman, of Monkwearmouth, requesting his opinion on an appearance in the ovary of a female, whose case had given rise to a divided opinion in the country.

Dr. Lee wrote to Dr. Bowman a letter now in the possession of Dr. Paterson. In this letter, he believes he states what was really the truth, that he was, at the moment, deeply and anxiously engaged, and unable to give the time necessary for such an examination; but that he would send the preparation to Mr. Wharton Jones, who would submit it to the microscope, and his opinion should determine the point. This letter has, for reasons best known to Dr. Paterson, been suppressed—indeed, its existence was for a time denied.

Mr. Wharton Jones pronounced the appearance in question to be a real corpus luteum, and this opinion was transmitted by Dr. Lee to Dr. Bowman.

Dr. Paterson, of Leith, then wrote to Dr. Lee that the preparation submitted to him was taken from the body of the woman above mentioned, and contained the identical change of structure on which Dr. Paterson had pronounced the judicial opinion impugned by Dr. Lee. Dr. Paterson then called upon Dr. Lee to retract his severe strictures.

This Dr. Lee refused to do, on these grounds: he admits he has been wrong in

agreeing to submit so important a matter to the decision of the microscope alone, that he did so without sufficient thought, and has been guilty of a great error in doing so. But he did so in the faith that he was truly and honourably dealt with, which his antagonists avow somewhat boldly not to have been the case; he did so in the conviction that the preparation was what it pretended to be—a recent one—and without a suspicion that it had lain four years, or even four weeks, in spirits; he did so, moreover, in the conviction that the reference was honestly made to him from Monkwearmouth of a point in dispute at that place or in its neighbourhood. Of course, this was an intentional deceit. But it is only fair to state, as part of Dr. Lee's case, that had he suspected the infamous trap laid for him, he would not have delegated to any one the decision of such a point; neither he nor any one could have thought of submitting to the microscope a preparation steeped in spirits for such a length of time. When he wrote to Dr. Bowman, he seemed chiefly actuated by a desire to rid himself of a laborious task, and, at the same time, promote the wishes of a professional brother, who approached him with fawning and artifice.

It is difficult to conceive what the plotters of such a scheme as this could expect to gain by it. They might, indeed, had Dr. Lee been weak in conduct, have made him abide by the decision of the microscope, but would the fact have been altered, would the sacrifice of Dr. Lee's professional name to a dishonest trick like this have affected in the smallest degree the scientific point in question?

Dr. Lee seems justified in his resolution not to permit the solution of this question to rest upon the investigation of Mr. Wharton Jones, by the avowal made by this gentleman in the report (carefully omitted by Dr. Paterson) that the appearances presented by the microscope do not manifest any difference between a corpus luteum the result of impregnation and one that is not.

Dr. Lee, moreover, does not appear by the narrative to have any other reason for believing that the preparation submitted to him and Mr. Wharton Jones is the same taken from the body of the woman already mentioned, except the assurance of Dr. Paterson; and really after the appearance which this gentleman voluntarily makes, and his detected mistatements, this would seem hardly sufficient. It is rendered still more questionable by the fact, that the anatomical characters of the body in the ovary, as now given by Wharton Jones, are at great variance with those set down by Dr.

Paterson four years ago; and that, in the preparation, there was found no deciduous membrane in the womb, though such an appearance is particularly described by Dr. Paterson.

My abstract would not be complete did I not here state, that Professor Owen, and other eminent anatomists, have confirmed Dr. Lee's opinion, that the appearance described and delineated in a coloured engraving by Dr. Paterson, was nothing but a clot of blood.

Add to all this, the unexplained falsehood about the letter. Having been trapped into writing to Dr. Bowman as a friend, Dr. Lee did not keep copies of his letters. But his recollection of having written another letter besides those the copies of which were supplied to him by Dr. Paterson, was distinct and positive. In answer to his repeated demands of that suppressed letter, its existence is again and again denied. At last he is insultingly told he is attempting to impose. After all this deceit, however, the fact of the existence of this letter in the hands of Dr. Paterson is extorted, but the admission is made without apology of any kind, and a copy of it is still withheld. To cover this disgrace, a new fraud even is attempted, and Dr. Lee is represented as having asked for a fourth letter. To complete the history, it appears that the editor of the Medical and Surgical Journal of Edinburgh printed the letters from copies, and not from the originals.

Verily, we think Dr. Lee may leave it to all men to determine where lies the fraud and the dishonour. But we trust we have attained our chief object, of destroying the pretension to determine so important a question as that of the pregnancy of females by so insufficient a test.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

[We inserted, two numbers back, an explanation of certain observations made in the course of an article which appeared during the month of November, and in which the state of the Royal College of Surgeons of Edinburgh was incidentally noticed. We have just received the following letter from the Secretary of the College, which we do not hesitate to print.—Ed. Gaz.]

To the Editor of the Medical Gazette.

SIR,

I BEG to refer you to the terms of my letter of the 17th December, containing an extract from your number of the 8th November, of which it was my duty, as Secretary of this College, to complain.

In that extract you had asserted that the College of Surgeons is at the present time "*literally bankrupt*," and that it was your belief that they had "had a proposal made to them by one of their leading members to sell their Museum to find ways and means to meet current expenses." Your number of the 27th December, now before me, contains a paragraph which amounts merely to a correction of the rumour as to the Museum. Now the averment of actual bankruptcy made by you upon your own authority was the only really important part of the statement; for you must be sensible that no proposition by an individual member of the College in regard to the Museum, however extravagant in itself, could have deserved a serious refutation by me unless from its bearing upon the other assertion. That assertion, I again repeat, is untrue, and has not the shadow of truth; and I therefore again request, as an act of reparation for the injury thereby done to the College, that you will contradict it in your next publication, and that you will at the same time insert in it this letter.—I am, sir,

Your obedient servant,

JOHN SCOTT, *Sec.*

Royal College of Surgeons, Edinburgh.

4, Queen Street, Edinburgh,
Jan. 6, 1845.

BRITISH MEDICAL ASSOCIATION.

To the Editor of the Medical Gazette.

SIR,

I AM directed to forward for your information the following communication which has been sent by the Society of Apothecaries to the President of this Association.

I am, sir,

Your obedient servant,

C. H. ROGERS HARRISON,

Honorary Secretary.

British Medical Association,
Exeter Hall, Jan. 5, 1845.

To Dr. Webster, Dulwich.

SIR,

I AM desired to inform you that the Court of Assistants of this Society has unanimously confirmed a report of the Act of Parliament Committee, communicating the statement made to the deputation from the Medical Association who honoured the Society with an interview on the 10th inst., and recommending that the Committee, should be authorized to take such steps as might be deemed expedient for approaching the Crown on the subject of a Charter of Incorporation of the General Practitioners, and I am further desired to inform you that the Committee are prepared to act without loss of time, on the instructions which they have

received from the Court of Assistants, to carry out the recommendation of their report.

I am, sir,

Your obedient servant,

ROBERT B. UPTON,

Clerk to the Society.

Apothecaries' Hall, Dec. 26, 1844.

RESEARCHES ON THE WOUNDS OF BLOOD-VESSELS.

By M. AMUSSAT.

1. WHEN the two carotids are cut at one and the same time in a large transverse wound of the neck, death is not instantaneous, as is commonly supposed; the hemorrhage lasts several minutes, during which the animal preserves all its faculties.

2. The carotid arteries do not remain gaping after their division, as would be supposed; and notwithstanding the volume of these vessels, obturator clots form as after the division of a single carotid.

In examining the plates which represent the arteries of dogs, and especially the carotid arteries of oxen killed after the Jewish fashion (bled to death without being knocked on the head) the organization of the clot is exactly what is indicated in the author's former memoir.

3. The simultaneous section, or that performed at a short interval, of the nerves of the eighth pair and of the carotid arteries in the middle of the neck, exercises no influence upon the formation of spontaneous clots or obturator plugs of carotid arteries cut completely across.

4. The spontaneous clot formed at the extremities of the divided arteries is composed of two clots; one exterior, already described in the former memoir; the other interior, which is nothing else than an organized coagulum absolutely resembling that formed by artificial means; as obturation, compression, cauterization, ligature, or torsion.

5. The spontaneous obturator clot is often very difficult to recognize. In order to find it, it is necessary to call to mind the anatomical disposition of the divided artery and to observe the pulsations at the extremity of the vessel. Besides, by the touch may be distinguished the small sanguineous mass which forms the clot.

6. It is therefore obvious that it is always by a clot or obturator plug that hemorrhage is spontaneously arrested, whether the animal dies or recovers; thus the doctrine of a *spontaneous clot external and internal* opposing the issue of blood from arteries completely divided, is the only true one; and contrary to the opinion of Jones and Bécclard, the artery may itself suffice."—*Comptes Rendus*, Dec. 1844.

WILSON & OGILVY, 57, Skinner Street, London.

THE
LONDON MEDICAL GAZETTE,

BEING A
WEEKLY JOURNAL

OF
Medicine and the Collateral Sciences.

FRIDAY, JANUARY 17, 1845.

ON THE
NUMERICAL RELATION OF THE
MEDICAL PROFESSION
TO THE
POPULATION OF GREAT BRITAIN.

ANNUAL RATE OF MORTALITY—THE NUMBER REQUIRED TO SUPPLY THE LOSSES BY DEATH.—REMARKS ON THE PROBABLE RESULTS OF THROWING OPEN THE PROFESSION TO UNLICENSED PERSONS.

By ALFRED S. TAYLOR,

Member of the Royal College of Surgeons in London (1830), and Lecturer on Medical Jurisprudence and Chemistry in Guy's Hospital.

THE subjoined tables have been drawn up from the Report of the Commissioners of the Census for 1841. An abstract of this Report, so far as it relates to the "Occupations of the People," has been published in the Companion to the Almanack for 1845, and from this I have derived the numbers of persons actually engaged in the exercise of the medical profession at the time of the late census. The other facts are a simple matter of calculation. It is necessary to observe that under the head of "medical profession" are comprised 1476 physicians, and 18,658 surgeons, apothecaries, medical students, cuppers, and dentists. Unlike the other professions, the medical is entered as of both sexes, comprising midwives, of whom 676 were returned for England, and 641 for Scotland. All professional persons, both above and under 20 years of age, are equally included.

No such returns as these have, I believe, before been made in this country; and although from the indiscriminate mixture of licensed and unlicensed persons, they cannot, in their present state, be regarded as perfect, yet they may serve to throw some light on the proportion of the members of the medical profession to the mixed population in counties,—in agricultural and manufac-

turing districts, and in different parts of Great Britain. From them, we may also calculate, according to the usual rate of mortality, the annual loss by death, and the average number required to replace those who are thus removed.

It will be seen from this table that the proportional numbers of the profession to the population are much greater in Middlesex and Surrey than in other counties, being 1 to 366 in the former, and 1 to 517 in the latter. This is obviously owing to the vast number of practitioners collected in and around the metropolis, forming nearly one-fourth of the whole aggregate of England, Wales, and Scotland. In the city of York, the proportion is large, although probably not larger than would be found to exist in all populous towns and cities. In the construction of the tables, no distinctions of this kind could be made; but it is probable that while the profession would average about 1 in 500 in towns, it would not exceed 1 in 1100 in rural districts. In looking to the counties, Kent appears to contain the largest number of practitioners, being 1 in 771 of the population, a proportion which, as we shall see hereafter, is much greater than the average for all the counties of England and Wales.

On the other hand, those counties which have the smallest number of members of the profession are,—1, the West Riding of York, which, with a population of considerably upwards of a million of inhabitants, has only 1 medical practitioner to 1291 persons; 2, Wilts, which with a population of upwards of a quarter of a million, has 1 to 1299 persons; 3, the small county of Rutland, which has 1 to 1330 persons, the population being, exclusive of the profession, only 21,286; 4, the county of Stafford, which, with a population of more than half a million of inhabitants, has only 1 medical practitioner to 1314 inhabitants; 5, Cornwall, which has 1 to 1364,—facts the more remarkable, since a large proportion of the labouring per-

Statistics of the Medical Profession in England.

Counties.	Persons of the Medical Profession.	Population exclusive of the Medical Profession.	Proportion of the Medical profession to the mixed Population.
Bedford	111	107,825	1 : 971
Berks	177	160,970	909
Buckingham	104	155,879	1498
Cambridge	143	164,316	1149
Chester	326	395,334	1212
Cornwall	250	341,029	1364
Cumberland	158	177,880	1126
Derby	225	271,992	1208
Devon	636	533,824	837
Dorset	143	174,900	1215
Durham	371	323,913	873
Essex	327	344,652	1054
Gloucester	529	430,854	814
Hereford	99	113,779	1149
Hertford	155	157,052	1013
Huntingdon	45	58,549	1301
Kent	710	547,627	771
Lancaster	1454	1,665,600	1145
Leicester	210	215,657	1026
Lincoln	335	362,267	1081
Middlesex	4298	1,572,338	366
Monmouth	117	134,238	1147
Norfolk	351	412,313	1175
Northampton	165	199,063	1206
Northumberland	300	249,978	833
Nottingham	214	249,696	1166
Oxford	168	161,475	961
Rutland	16	21,286	1330
Salop	232	238,816	1028
Somerset	521	435,461	835
Southampton	407	354,597	871
Stafford	372	510,132	1344
Suffolk	301	314,772	1045
Surrey	1125	581,553	517
Sussex	362	299,391	827
Warwick	438	401,277	916
Westmoreland	63	5,6391	895
Wilts	199	258,534	1299
Worcester	199	233,137	1172
York, East Riding	218	194,718	893
York, City and Ainsty	80	38,241	477
York, North Riding	197	203,925	1035
York, West Riding	894	1,153,207	1291

sons in these counties are engaged in occupations liable to lead to accidents ; 6, the county which is the least supplied is Buckingham, for here we find only 1 medical practitioner to 1498 persons. This may be regarded as an agricultural county. It has rather more than half of the number of practitioners which it should have, according to the present average of England and Wales. (See top of next page.)

It will be seen from this table, that the counties of Wales are more thinly supplied

with the medical profession than those of England,—the minimum proportional number exists in Pembroke, being 1 to 1833 ; the maximum number in Flintshire, being 1 to 879 of the population. It is remarkable that the populous county of Glamorgan, occupied as it is by a mining population, should have only 1 medical practitioner to 1295 inhabitants.

The British Islands have more than the average in proportion to the population, being 1 to 677 inhabitants.

Wales and the British Islands.

Counties.	Persons of the Medical Profession.	Population exclusive of the Medical Profession.	Proportion of the Medical Profession to the mixed population.
Anglesey	29	50,871	1 : 1754
Brecon	49	55,554	1133
Cardigan	48	68,448	1426
Carmarthen	64	106,262	1660
Carnarvon	65	81,028	1243
Denbigh	72	88,866	1231
Flint	76	66,843	879
Glamorgan	132	171,056	1295
Merioneth	29	39,332	1356
Montgomery	61	69,158	1133
Pembroke	48	87,996	1833
Radnor	18	25,338	1407
British Islands, including Guernsey and its seven adjacent Islands, Jersey & Isle of Man.	183	123,857	677

Scotland.

Counties.	Persons of the Medical Profession.	Population exclusive of the Medical Profession.	Proportion of the Medical Profession to the Mixed Population.
Aberdeen	341	192,046	1 : 563
Argyll	92	97,279	1057
Ayr	171	164,185	966
Banff	82	49,597	604
Berwick	44	34,398	782
Bute	29	15,740	543
Caithness	18	36,325	2184
Clackmannan	22	19,133	869
Dumbarton	51	44,245	867
Dumfries	78	72,758	932
Edinburgh	898	224,556	250
Elgin	45	34,967	777
Fife	135	140,140	1038
Forfar	68	170,520	2506
Haddington	5	35,886	7177
Inverness	72	97,799	1358
Kincardine	31	33,044	1066
Kinross	10	8,753	875
Kirkcudbright	41	41,078	1002
Lanark	523	426,444	807
Linlithgow	26	26,846	1032
Nairn	14	9,203	657
Orkney and Shetland	58	61,007	1052
Peebles	14	10,485	749
Perth	175	137,215	784
Renfrew	161	154,911	962
Ross and Cromarty	46	78,639	1709
Roxburgh	58	45,967	792
Selkirk	5	7,985	1597
Stirling	73	81,984	1123
Sutherland	11	24,771	2252
Wigtown	37	39,158	1058

On examining the table for Scotland, it is impossible to avoid being struck with the extreme differences in the proportion of the profession in different counties. Thus, while in Edinburgh there is one medical practitioner to 250 persons, in the adjoining shire of Haddington there is only 1 to 7177 persons. The vicinity of Haddington to Edinburgh at once accounts for the difference. It seems extraordinary that there should be only five medical practitioners in Haddington, to a population of nearly 36,000 persons; but such is the return. The extremes in these two counties must, therefore, be considered to compensate each other, and in this view the proportion of the profession in Edinburgh should be diminished, and that of Haddington increased.

Among the other Scottish shires, in which the profession is most numerously found, are,—1, Bute, where the proportion is one in 513, the population not reaching 16,000; 2, Aberdeen, where the proportion is, with a large population, 1 in 563; and 3, Banff, where, with a comparatively small population, it reaches 1 in 604,—a proportion considerably above the average of Great Britain.

After Haddington, the smallest proportional number of medical practitioners are found in Forfar, where, with a large population, there is only one to 2506 inhabitants; 2nd, in the large but thinly populated county of Sutherland, where it is only 1 to 2252 inhabitants; and, 3d, Caithness, where it reaches 1 to 2184 inhabitants. In the large county of Lanark, containing nearly half a million of inhabitants, the profession averages 1 to 807 persons. Orkney and Shetland may be considered as very fairly provided, the number of medical practitioners in these remote islands averaging 1 in about 1000 inhabitants.

Notwithstanding the wide differences thus existing in the Scottish shires, it must be obvious at a glance that, on the whole, the profession is much larger to the population in Scotland, than it is in England and Wales. This will, perhaps, be rendered more evident by the following results.

According to the Census of 1841, the total number of persons thus engaged in medical practice in England and Wales amounted to 18,436; and in Scotland, at the same time, to 3,568. Thus:—

		Proportion to Population.	
In England and Wales, (the Channel Islands excluded)	. . . . .	18436	= 1 : 856
In Scotland	. . . . .	3568	= 1 : 734
		<hr/>	
		22004	
Deduct Midwives in England	. . . . .	676	
„ „ Scotland	. . . . .	641	= 1317
		<hr/>	
Total in Great Britain.		20,687	

This would leave a total of 20,687 practitioners of medicine in Great Britain; but another deduction should be made from this total, of those who are included under the head of medical students, cuppers, and dentists. There are no data to enable us to make this deduction with correctness, since the object of ascertaining the “occupations of the people” was rather of a political than a professional nature. It would, however, be easy to acquire at another time a statement from each medical practitioner as to whether he held a diploma, and of what College; and it would be more satisfactory if those members of the “medical profession” who are of the female sex, were altogether excepted from the return!

The aggregate above given does not exactly correspond with that stated at the commencement of this paper, not even on adding

the numbers of the medical profession in the Channel islands. The difference, however, is not very material.

From these tables, it would appear that the numbers of the medical profession practising in Great Britain are often considerably overrated. It appears to me impossible to estimate medical students, cuppers, and dentists, engaged in practice, at less than 2000, and this would leave, according to the aggregate returns of the counties, only about 18,000 members licensed to practise in England, Wales, and Scotland. Hence, instead of the average being as it is above presented, about 1 to 800 of the population, it would not probably be more than 1 licensed practitioner to 1000 persons.

To what extent the medical exceeds the legal profession in numbers will be evident from the subjoined table.

Total Numbers.	England.	Wales.	Scotland.	Channel Islands.
Legal Profession	13759	396	3185	114
Medical Profession	17745	691	3568	183

There can be no doubt that for many years past, the numbers entering the medical profession have greatly exceeded the

wants of the community. In no other way can we account for the strong competition which exists for all public offices and ap-

pointments, however insignificant, and the very low and insufficient rates at which remuneration is made to the medical officers of Poor Law Unions and public institutions generally. It is impossible to understand why men belonging to a liberal profession should compete with each other for offices, which, while they entail a far heavier amount of labour and responsibility, yield often less remuneration than clerkships to Quarter Sessions, were it not that the medical profession is greatly overcrowded. Other facts well known to professional men, which need not here be alluded to, also bear out this view. Allowing that the licensed practitioners now form the one-thousandth part of the community, it is not too much to say that a proportion of *one professional person to twelve hundred* of the community would be ample, and that any number greater than this must tend to create that unfortunate state of things which is at present witnessed. This estimate is, in the absence of more accurate calculations, founded on the tables appended to this paper. At any rate the present distressed state of the profession, and the decline of all the medical schools, metropolitan and provincial, render it probable that the proportion above given as sufficient for the community cannot be far from the truth. Admitting this, we shall see on referring to the statistical table of England, that no less than 32 counties and districts out of 43 are overstocked; in Wales there are only three counties out of 12 in this predicament, while in Scotland, out of 32 shires, there are 25 which have a larger proportion than that assigned above as the probable necessary average.

The occupations of a population, and the relative healthiness of districts, with other circumstances, may render it necessary to raise or diminish the average numbers of the profession. Thus, a manufacturing population exposed to accidents from machinery, and living in densely crowded places, will require a larger number of professional men, than one living in a rural district and given entirely to agricultural pursuits. There is a striking difference in this respect between the counties of Wales and England. It might be interesting to connect the comparative healthiness or unhealthiness of districts with the proportion of professional men to the mixed population; but it would be foreign to my present purpose to enter into a discussion of this kind. Although the Registration act has done much, we are as yet scarcely provided with the elements necessary for such calculations. Many interesting facts have, however, been brought to light by the researches of Mr. Farr, on the number of deaths by *violence* in England and Wales, and these are well deserving of the attention of medical practitioners. In

1838, the violent deaths in the whole population amounted to 12,055; in 1839, they amounted to 11,980—the average falls little short of 12,000 per annum. It has been ascertained that in the northern counties 16 persons in 1000 die violent deaths annually; in Staffordshire, Warwickshire, and the other western counties, 14; in Lancashire and Cheshire, 13; in Cornwall and the other south-western counties, 11; in the metropolis, 8; and in Essex, Suffolk, and Norfolk, 7. The accidents producing violent deaths are least common in the agricultural districts, more frequent in cities and manufacturing places, and most fatal in the mining parts of the country.

There is one subject which remains to be noticed in connection with these tables, viz. the number of professional persons annually removed by death, and the number required to replace them. Admitting that the present number of licensed medical practitioners averages 1 to 1000 of the community, this would give to Great Britain about 18,000. From the reports under the Registration act, it would appear that the average annual rate of mortality for England and Wales amounts to about 1 in 45 for the whole population. It is true that the rate of mortality is different at different ages; and that it is proportionally greater in persons under puberty and in advanced age than in the intermediate period. The number of deaths between 20 and 60 is found to vary but little according to age. If, therefore, we assume that the same law respecting the average mortality holds with regard to the medical profession as with the non-professional public, we may take 45 as the divisor, and this would give an annual loss to the profession of 400 of its members. The number would be rather less if 1 in 45 were considered to be too high a rate of mortality for persons generally above the age of 20 years. Thus, then, the continued annual addition of about 400 members, and a slight yearly increase in proportion to the increase of population, would be required to keep the profession in its present state. Some allowance must be made for those who annually enter the army, and many who emigrate to the colonies. Taking these at the maximum at one half of the number required for the restoration of the annual losses in Great Britain, it would appear, in a time of peace, that the yearly addition of about 600 members to the profession would maintain it in the state in which it now is. Admitting, however, that 15,000 practitioners are sufficient for Great Britain, similar calculations would lead to the result that the yearly additions to the profession should not exceed 500 members, including those required for Great Britain and its colonies. But it is notorious that the number of new members annually ad-

mitted in England and Scotland has been for many years past much larger than this. From the report of the Apothecaries' Society, it appears that during the last 28 years the diploma has been granted upon an average to 360 persons annually; and although many of these at the same time received the diploma of the College of Surgeons, yet a certain annual number, including all who enter the army and navy, and who receive the diploma of the College alone, must be added. To this number we must likewise add those who are admitted by the Royal College of Physicians in England, and by the Universities and Colleges in Scotland*. It will, I think, be apparent from a consideration of the various matters here brought forward,—1, that many more medical men are now licensed to practise than the wants of the public demand; and 2, that with the number of new practitioners actually required, the present number of medical schools in London, the Provinces, and in Scotland, could not possibly be maintained with any degree of respectability or efficiency.

The number of complete schools of medicine, independently of those institutions, either private or public, where distinct courses of lectures on one or more medical subjects are given, amounted at the commencement of the present session (Oct. 1844) to *eleven* in London, and to *seven* in the provinces. This statement is taken from the advertisements which appeared at that time in the medical journals. If the whole number of those new members now annually required to keep the profession in its present state, and to supply the army and navy, were equally distributed among these medical schools, it would give only on an average 35 new members per annum to each school: if the actual requirements of the community were regarded, according to the foregoing considerations, the average would be only *twenty-five* new members per annum! In this calculation the numerous medical schools and colleges of Scotland are omitted. It will be easily understood, that by the necessary introduction of them, the average number of pupils to each would sink considerably lower. Thus, then, the present number of schools and colleges can only be maintained by a forced and undue supply of professional men to the public. The evil is in some respects righting itself; for the number of those now attending the schools is almost universally diminished, and appears to be annually decreasing.

The tables heretofore appended give us, for the first time, an idea, if not absolutely,

at least approximately correct, of the numerical relation of the profession to the public. Events passing around us, and within the knowledge of almost every individual, show that this numerical relation is at present too great, *i. e.* that there are more professional men than the public require. The application of the common law of mortality in this country, to the ascertained numbers of professional persons, enables us to determine approximately the number required annually to replace those who die; and this number admits of comparison with the number of those annually licensed to practise. I am well aware of the fallacies to which figures are liable, but I do not claim for the conclusions which I have drawn more consideration than the tables warrant. It is scarcely possible to enter upon such researches without being enticed into speculation; but as all the premises upon which the conclusions are founded are fully detailed, the reader will be able to judge for himself.

When the profession is overstocked, and so many more members are annually licensed than can find any profitable occupation, it is impossible to understand why men, who ought to know its actual state, should advise that all restrictions on medical practice be set aside. Its members are even now too numerous for the community, and yet it is proposed to add more!—the addition to consist, in the words of the minister of State who introduced the Medical Reform Bill, of “any men whatever, who possessed skill and knowledge to practise medicine.” Strictly speaking, this implies any men whatever, who *assume* that they possess skill and knowledge to practise medicine,—a very large class, especially in country districts! The man who devotes many years to the actual study of his profession, is thus placed on a level with him who *assumes* that he possesses medical knowledge without having devoted any time to the acquisition of it. Again, the competent and industrious candidate who receives his diploma from the examining boards appointed under the Bill, is virtually placed on the same level with the ignorant and idle candidate, who is rejected by these boards: for the latter, notwithstanding his incompetency, *thus proved by his rejection*, may retire into a country district and practise to the injury of the competent man as well as the public. Is it to be supposed that, should such a measure receive the sanction of the legislature, the members of the medical profession, pauperized as it is in many of the rural districts of England, will preserve only the proportion to the population, and to its increase at the census of 1851, which it had in 1841? It appears to me certainly not:—there will be few counties in which the proportion will not be at least doubled, and

* A writer in the last number of the Quarterly Review estimates that from the seventeen licensing bodies now in existence, there are probably from 800 to 1000 physicians, surgeons, and apothecaries, who annually receive diplomas!

probably tripled; and instead of 1 to 1000 of the population, a proportion even greater than is required, we shall find the new practitioners, including the licensed and unlicensed, to form probably 1 to 500. If any one doubts the correctness of this statement, let him turn to the statistical tables of the "occupations of the people," and observe the number of persons who are classed as the unoccupied. The census of 1841 demonstrates that in England, Wales and Scotland, of the male sex only, and above 20 years of age, there were without any occupation 274,482. It is not to be supposed, however, that the new practitioners in medicine will be derived from this class alone. Among the occupied millions there are numbers so dissatisfied with their condition, as to be ready to change it for what may have only the appearance of being more profitable employment. They will be put to no expense by preparatory study or the purchase of diplomas. In order to give them a title to practise, they will merely have to *assume* that "*they possess sufficient skill and knowledge to practise medicine.*" The condition of these persons cannot be made worse by such a change, while that of the general practitioner must inevitably be, under such legalized competition, a lower degree of pauperization. These pretenders care not about appointments to public offices, the registration of their names with Boards of Health, the serving on juries, or the power of recovering debts by civil action. What they will look to will be the immediate means of living; and these they will obtain to the inevitable loss of the general practitioner, and to the injury of the public. Those who require medical advice, it is said, may consult a printed register to determine who is and who is not a licensed practitioner; but the very principle of the new measure is, to allow the public to employ either one or the other. The deplorable state of ignorance existing in rural populations especially, does not appear to be have been here taken into consideration. As some test of this, it may be remarked, that nearly one-half of all those who are married of both sexes are unable to write their names! In Monmouthshire and Wales these amount to 60 per cent. of the married! This has been proved by the returns under the Registration act: and yet it is assumed, that the public have it in their power to consult a printed register before they call in a medical man! One fact like this appears to me sufficient to show that a large portion of the public of England and Wales are not fitted to distinguish the incompetent from the competent practitioner.

[It is very true that some can read who are unable to write their names, but how many in England are there, married and un-

married, who are unable to read or write! Since the above was written, an article on the Medical Reform Bill has appeared in the Quarterly Review (December 1844). The writer observes that the Government "having taken the pains to point out to the public the proper course to be pursued" (*i. e.* consulting a printed register of licensed medical practitioners) "the safest way will be to leave it to the good sense of individuals to protect themselves." How many, out of the total population of Great Britain, possess that amount of "*good sense*" requisite for self-protection (for some kind of "protection" against the results of the proposed Reform Bill is clearly admitted to be necessary)—the writer does not stop to consider! He admits that the profession is at present "*overstocked*" with *licensed* practitioners, and yet he proposes to mitigate the evil by admitting *unlicensed* persons to practise.]

THE PERIODICAL MATURATION AND EXTRUSION OF OVA, INDEPENDENTLY OF COITUS, IN MAMMALIA AND MAN,
PROVED TO BE

THE
PRIMARY CONDITION TO THEIR
PROPAGATION.

By TH. L. W. BISCHOFF,

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Translated by

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[Continued from p. 450.]

I THINK these experiments of my predecessors, together with my own, prove most decisively, that, even though the advance of the seminal fluid of the male through the fallopian tube up to the ovary, and its influence upon the ova, be prevented, yet, on the appearance of "the heat," and in the foregoing instances after reception of the male, all phenomena develop themselves in the ovaries and ova notwithstanding, just as in the perfectly normal condition. The ova mature, the Graafian vesicles swell and open, the corpora lutea form, the ova escape and reach the tube, and some of the phenomena of development even commence: as, however, the influence of the semen on the ova is prevented, that process does not advance farther, but the ova retrograde, dissolve, and abort. This last circumstance proves the whole succession of these phenomena to be altogether independent of coition, and to be solely and abstractedly founded on the progress of development of the ova.

Since I have proved the material contact of the seminal fluid with the ova, all thoughts of an "aura seminalis," of a resorption of the semen, or a still more mysterious influence of copulation, which previous observers declared to be demonstrated through these very same phenomena, are altogether out of question, and specially refuted in these particular instances, by the fact, that the ova, in consequence of the impediment to that material contact, were not endued with the capacity of development, and aborted. Had the extrusion of the ova, the development of the corpora lutea, &c. in these instances been conditionate on the semen and coition, the ova would have become fecundated also, and have advanced in their development. I consider, therefore, that notwithstanding the intereurrence of copulation, these experiments prove the independent progress of development of the ova.

Another observation which I was so fortunate as to make, shows, however, still more decidedly, how independent the maturation and extrusion of the ova are of coition.

With a view of ascertaining the point to which the seminal fluid penetrated in the bitch immediately in the act of coition, I obtained a strong and vigorous young one, which had never borne young. In order that I might know with perfect certainty when the first act of copulation took place, I kept the animal about me in my house, and watched it closely. At the beginning of June, 1843, I remarked that it was about to be "in heat," for the dogs began to follow her about, and a flow of blood took place from the vagina. On Friday, June 9th, however, the animal would on no account permit coitus to take place. It was therefore chained up, and kept strictly isolated until mid-day on Sunday. At three-quarters past 1 o'clock on that day I again brought a dog to her, and she then for the first time received the male.

Immediately afterwards I cut out the left uterus, ovary, and fallopian tube, closing the wound by suture. I first examined the uterus, and found it quite filled, even up to its extreme point, with lively-moving spermatozoa. My next object was to examine the tube, in order to see whether the semen had already penetrated into it also; as I was preparing this, and laying bare the

ovary, I saw to my surprise that the ova, which I had confidently expected to be yet in the Graafian vesicles, must have already left the ovary. I observed upon the ovary five small red openings, from one of which a small red mass grew forth, and saw that five Graafian vesicles had already opened there. The formation of the corpora lutea proceeding from the bottom and walls of the follicle was already far advanced; at the same time, however, they still contained a considerable cavity filled with limpid serum, but which no longer held an ovum. This afforded me additional evidence of the probability that such a condition of parts had led previous observers, who were unacquainted with the ovum itself, to think that the follicles were not as yet opened. I forthwith, however, became fully convinced that the opening had taken place, for I found the five ova close together, already advanced nearly two inches in the tube. The investigation of them yielded nothing novel. Their condition was altogether that which I have always seen in ova at the same stage, and as usual perfectly resembled the fully matured ovarian ova. On the other hand, I sought through the entire length of the tube, down to the ostium uterinum, for spermatozoa, without success; no such a thing was to be seen anywhere, and I devoted so much time and care to it, that I venture to assert positively that the seminal fluid had not yet penetrated into the fallopian tube.

On the following morning, at 10 o'clock, after 20 hours therefore, within which time, according to my previous observations, I had found that the semen can reach the ovary, I had the animal killed. The right ovary also exhibited five small openings, and five corpora lutea which were more advanced in their development than those of the opposite ovary, and in addition to these one very large unopened Graafian vesicle. This fallopian tube also contained five ova, which had advanced more than half way down it, and were several lines distant from each other. Three of them were perfectly normal in condition, and very like those of yesterday. Two, however, were distinctly abnormal and abortive, the zona being indistinct; the discus proligerus very incompletely developed; the yolk a small irregular mass of vitelline granules. I now also found spermatozoa

in the tube, some of which were still in motion, but they had only penetrated about three lines from the ostium uterinum. The tube did not contain any others throughout the rest of its extent, neither was there any trace of them around or upon the ova, so that the latter were certainly not yet fecundated.

I consider the foregoing investigation affords irrefutable proof that the ova, after having reached maturity, quit the ovary, and enter the fallopian tube, independently of all influence of copulation. That that act was not accomplished earlier than it was observed, may, from the measures adopted, be assumed as certain. That the ova might have been extruded during and in consequence of coition cannot at all be assumed, for the following reasons: in the first place, it is certain that that result does not always attend the act, as I have myself found the Graafian vesicles still closed in other bitches after they had received the male several times; and in the second place, it is not conceivable that the ova should have travelled a distance of two inches through the narrow fallopian tube in the short space of a quarter of an hour, whilst they require about eight days to traverse the remaining two to three inches of its length.

If, then, in this instance, the ova had actually left the ovary quite independently of copulation; if they must be considered to have reached the fallopian tube unfecundated, and to have remained so even after 20 hours; the next question is, how to reconcile this with my previous observations, in which I found the Graafian vesicles to be still closed in bitches 6, 18, 20 hours, after the first coitus, and the semen to have penetrated through the entire tube, even to the ovary.

The solution of the question is manifestly this; that the ova, when once matured, have a certain scope afforded both as to time and place for their fecundation. It depends, as it would seem, upon the individuality of the animal, and upon the opportunity, as to whether coitus be permitted and accomplished when the ova are still in the ovary, or when they are already extruded and have reached the fallopian tube. If the natural habits of the animal are not interfered with, and the opportunity for copulation be free, it appears that the sexual impulse manifests itself

before the ova are extruded. If coitus take place at that period, the semen has sufficient time to penetrate through the fallopian tube to the ovary, and this can take place in the dog in 20 hours, as my previous observations show. Other individual animals do not perhaps permit the act until a later period, or the opportunity fails, as in my case, because they are confined. The ova in such case are extruded notwithstanding; they may also still become fecundated by copulation taking place. I cannot determine with precision the range of time within which this is possible. As, however, bitches usually receive the male during eight days, and as the first more precise phenomenon of development of the ova, viz. the division of the yolk, commences in the lowest part of the fallopian tube, where they are to be found about the seventh and eighth day, this would seem to denote the limits of the capacity for fecundation (*befruchtungsfähigkeit*) of ova in the dog.

Since I gained an insight into these circumstances, my attention has been drawn to many results of my former experiments, which I had previously valued but slightly, and put a different interpretation upon. I was, as I have said before, prepossessed with the opinion that coition was the cause of the extrusion of the ova from the ovary. I therefore, like all my predecessors, always calculated from the first act of copulation. It happened accidentally that most of the animals which I made use of especially for this subject, had probably received the male before the ova were extruded. But I now find amongst my observations several instances in which I have remarked that, although the ova were found in the upper third of the tube, yet I saw spermatozoa only in its lower part. When once, however, I became acquainted with the fact that they might advance through the entire length of the tube, I thought I must have overlooked them in the upper portion in the above instances, perhaps because they were few in number, or I had not been sufficiently careful, and so on. But I am now convinced that such were instances in which the ova had passed out before coitus had taken place, and the seminal fluid had time to advance higher up into the tube. As a rule, I have also seen spermatozoa upon the ova in the

lower third of the tube only; more rarely in the parts above.

With respect to rabbits, (in which animal we cannot ascertain the presence of "the heat" so precisely as in the bitch,) when the doe receives the male, it seems that, in general, the ova are not extruded before the semen has had time to reach the ovary, for which, according to Barry and myself, nine or ten hours are required. In rabbits I have also always found spermatozoa upon the ova in the upper third of the tube; in them, also, the division of the yolk commences higher up in the tube, and probably, therefore, the scope for the capacity for fecundation of the ova is much shorter than in the dog.

It follows, then, from all the foregoing, that the mode of calculating the time of the extrusion of the ova, according to the first act of coition, and which has been hitherto universally the custom, is altogether uncertain, and can only, in a measure, approach to correctness (*annäherungsweise*.)

If then, according to this, it be certain that the ova may quit the ovary previous to coition, and enter the fallopian tube, so there can be no doubt but that this also takes place, when the act of coition is not effected at all, in which case, however, the ova of course abort. But very few data are to be found in previous authors which bear upon this point, and those naturally do not refer to the ovum, but to the Graafian vesicle and corpora lutea.

According to Kulemann (*Observat. quæd. circa negot. generationis*, p. 15, *Epicrisis*), in sheep which are "at heat," and which do not receive the male, or at least are not impregnated, no Graafian vesicles burst, and no corpora lutea form; at least he signifies that such only occurs as an exception.

Some experiments of Hausmann's unfortunately have not that demonstrative force which they would have possessed, had not the author slighted and denied the existence of the ovarian ovum. A bitch was "at heat" from the 29th of October until the 4th of November; coitus, however, was not permitted. On being killed at that date, the ovaries presented "Graafian vesicles, which had the appearance of corpora lutea, but exhibited no point of rupture, contained a limpid fluid but no ovum." (l. c. p. 73, exp. 25.) In another experiment (p. 87, exp. 41) a

sow was "at heat" on the 23d of June, but was not admitted to the boar. It was again "at heat" on the 9th of July, and would have received the male, but was not allowed. On the 12th coitus was permitted, and the animal was opened twenty minutes afterwards. The left ovary exhibited five mature Graafian vesicles, which had not burst, and six corpora lutea; the right also presented five mature vesicles, and three corpora lutea. Hausmann is of opinion that these corpora lutea owed their origin to the animal being "at heat" on the 23d of June.

With respect to the sheep, Hausmann says (l. c. p. 94):—"When the sheep does not receive the male, or is not impregnated, no Graafian vesicle bursts; yet it seems that, after frequently returning and unsatiated sexual desire, a Graafian vesicle does burst; after which an imperfectly developed corpus luteum forms." And in Exp. 56, p. 95, he found close to a corpus luteum, in the left ovary of a sheep which was then "at heat," and which had also copulated, another such body, less perfectly formed, which he himself considers to be a proof "that a Graafian vesicle may at times open without copulation." In exp. 58, p. 96, he farther states, that a corpus luteum was found on the ovary, near to a Graafian vesicle which had burst as the result of former coitus, "although the sheep had not received the male, but had several times been 'at heat.'"

[To be continued.]

CASE OF
PURPURA HÆMORRHAGICA,
PROBABLY ARISING FROM VARIOLOUS
CONTAGION.

By N. ADAMS, Esq. Banchory.
(For the London Medical Gazette).

J. S., a farmer, residing in a healthy district of the country, of a sound constitution and sober habits, about 25 years old, was engaged with his servants in cutting hay on the 3d of July, although he did not feel altogether well. Next day he was seized with nausea, general uneasiness, and other feelings, which he fancied might be the preliminary symptoms of an attack of small-pox, as he had been visited about three weeks previous by a sister, who had just recovered from the dis-

ease in its modified form. He was confirmed in this opinion next day by remarking some purple spots on his limbs: he took some opening medicine, and confined himself to bed in a well ventilated room.

I saw him for the first time on the 6th, at which time his face was puffly, especially his lips; his eyes deeply ecchymosed; the whole body rather swollen, but not so as to pit upon pressure; purple spots on his limbs, and large vibices on the neck, especially behind, all the lower part of the abdomen being covered with the same. His pulse was from 100 to 105, soft, full, and undulating; his tongue swollen, and a white rim running along his gums close to the teeth. The urine was of a dark yellow colour, but did not stain a piece of linen dipped in it. I bled him to the amount of ten ounces: the blood was sisy, but its coagulum loose. A solution of carbonate of potass with lemon-juice to be administered frequently, and *vj.* gr. of calomel, with *viii.* gr. of Hydrargyrum e. Creta, to be given next morning.

On the 7th, the purple blotches much extended, the lower part of the abdomen in particular being altogether of a dark purple colour, and the back thickly marbled with vibices and purple spots; stigmata on the arms and legs, but less marked than on the trunk; there had been considerable oozing of blood from the gums, and from the orifice made in the arm; the ecchymosis on his eye enlarged, and of a darker colour; impulse of the heart preternaturally great; throbbing of the arteries in the epigastrium and neck; no delirium; the urine darkish and turbid, deposited little sediment, but upon the application of heat some small coagula floated in the water; it still did not stain a piece of linen cloth; pulse 120, soft and feeble. The opening medicines having produced little effect, *vj.* grs. more of calomel, and $\frac{1}{2}$ oz. castor oil, were directed to be given. A draught, composed of lemon-peel and cream of tartar, to be administered *ad libitum*.

On the 8th, at noon, debility greatly increased; pulse 120, soft and feeble; the discharges from the bowels consisting principally of blood; the urine also reported to be bloody; slight oozing of blood from the gums and arm; the greater part of the back, and the whole of the abdomen, of a dark

red or livid colour; numerous stigmata and vibices on the other parts of the body; much jactitation and painful singultus, for which an opium pill, and a mixture with creasote, were ordered. Sago, seasoned with brandy, to be offered to him occasionally, and a strong solution of quinine to be had in readiness, to be given if the hiccup should settle. The gums to be washed with a solution of alum.

At 8 p.m., the weakness, and all the other bad symptoms, greatly aggravated; singultus had at first been stopped, but had returned of late; pulse at the arm scarce perceptible; alvine discharges like tar, those from the bladder of pure blood; the extremities losing their heat; great sinking, and muttering delirium, when left to himself; the colour of the body inclining to a dark green in many places; no appearance of vesicles, pustules, or papulæ; the eruption no where elevated above the surface; the eyelids, as well as the eyes themselves, were ecchymosed, and there were a few stigmata on the forehead, but no discolouration of the rest of the face. Brandy to be given *ad libitum*.

He died at 11 o'clock, p.m., that is to say, about five days after the commencement of the attack.

The disease described above is so uncommon in this part of the country, that although I have now been in pretty extensive practice in it for more than twenty-five years, I have never seen nor heard of any case exactly similar. I have met, indeed, with cases of *purpura hæmorrhagica*, but with none possessing the aggravated form of the present case, nor under circumstances rendering it so difficult to account for its spontaneous development in the system. In the absence, then, of any other imaginary cause to account for its generation in the present instance, I am inclined to believe it to have been connected with the contagion of small-pox, to which, as stated above, the patient had been exposed some weeks previous to the attack. What confirms me very much in this supposition is the similarity of the symptoms to those of a certain anomalous type of small-pox described by some of the older writers on that disease. For example, the following history of small-pox, related by Morton, bears a very striking resemblance to the case given above.

"*Historia* 39.—Martha Meade, an-

cilla, duodeviginti annos nata, die 24 Januarii, 1691, derepente cephalalgia et lumbagine immani corripiebatur.*** Die morbi tertio, mensis nimirum 27. Pharmacopola accersitus, post bolum nescio quem præcedenti nocte exhibitum, nulla efflorescentia in cute se prodente, audacter a vena cubiti ꝑxiv. vel xvi. sanguinis eduxit, qui cum impetu exsiliebat, atque nullotenus rheumatici sanguinis ad instar, concresebat, fibris penitus privatus. Die morbi quarto mane ego accersitus animadverti universam cutem efflorescentia continua et plana intense rubra, non scarlatina verum levi et plano crysipelate perfusam, maculis rubris minoribus, et nigris majoribus ubique per totum pectus sparsis. Urinam insuper ægra reddidit copiose et frequenter atque sinceri sanguinis ad instar intense rubrum. Dormiebat quidem quadantenus, verum oppressa et languida, atque pulsu tremulo et inordinato laborans, sese plurimum et pæne perpetua jactabat. * * * Sub finem quinti diei morbi, sanguine confertim a bronchiis exiliente suffocata periit labiis et manibus (uti in confluentibus variolis plerumque contingit), quadantenus ab inani naturæ nisu tumefactis. Cadavere inspecto cutem deprehendi (visu horrendum!) ubique planè nigricantem, proximo autem die colore cæruleo imbutam, qualem colorem etiam omnia lineæ sanguine conspurcata. Aquæ saponacæ primum immersa planè exhibebant, ac si fuissent arte tineta, quæ labes haud facile delabatur. Tantum valet hoc venenum, uti ad ἀκμήν pervenit in humanum ipsorum crasi imbutanda.”—*Hist. Variol. Var.* xi. 39.

In another place the same author observes:—“Malignæ enim hæmorrhagiæ a soluta sanguinis crasi et colantium glandularum eo spirituum languorem laxitate per διαπήδησιν ex intestinis, renibus, naribus, nonnunquam ex oculis, auribus, dentium alveolis, ‘qua porta datur’ equè ac è vasis uterinis instar loturæ carnum ubique perfusissimè scaturiunt, earumque prænunciæ sunt petechiæ frequentissimæ. Maculæ purpureæ et nigre quales peste correptis paulo ante obitum accidunt, quæ pari passu cum hæmorrhagiis cum quibus conjunguntur, numero et magnitudine, unaquaque pænè hora augentur vel diminuantur.”—*Ib.* viii.

Sydenham briefly mentions the complication of purpura with small-pox in the following passage:—“We must

confess that a bloody urine and purple spots, which are the most certain fore-runners of death, sometimes happen, when there is scarce any sign appearing of the small-pox, or but very few pustules coming out; and as these generally accompanied the pox that fluxed most, so now and then they invaded so very early, that they killed the patient before the full eruption.”—*Works translated by Pechy*, page 408; see *Greenhill's edit.* page 333.

The same symptoms, namely, purple spots and discharges of blood, are also mentioned at page 128 of the latter edition. Heberden gives the following account of this complication of small-pox:—“That very formidable symptom, bloody urine, has come on about the fifth day from the first sickness; the eruption in the meantime has hardly risen above the skin, chiefly shewing itself in purple spots and blotches, and resembling varolous pimples only on very few places. The stools are likewise bloody; the very tears have been like lotura carnum; and if a small scratch has anywhere been made in the skin, the blood has for many hours continued to come out, and has hardly been stopped. This hopeless state has been terminated by death in three or four days after the eruption; nor have I known one exception.”—*Comment.* 2d edit. p. 440.

This is not the place for entering at length upon the ancient history of this variety of small-pox; but I may briefly mention, that the green and black varieties of small-pox, characterised by dark-green or purple spots, and bloody urine, are described by Rhases (*Cont.* 420, 2 and 4), and by Avicenna (ii. 1, 3, 6.) These descriptions of this malignant variety of small-pox agree so well with the symptoms of the case which I have related, that it is impossible not to entertain a strong suspicion, at least, considering the circumstances under which it occurred, that the latter must have originated in varolous contagion; and if so, it is a proof (as both the subject of it, and his sister, from whom he must have contracted the disease, had been vaccinated in infancy), that small-pox after vaccination will sometimes assume its most malignant forms. It is deserving of remark, that no more cases of small-pox occurred in the family, or in the neighbourhood. I took care, however, to have every person re-vaccinated who

had come in contact with the patient during his illness, and to have the bedroom and adjoining apartments properly fumigated.

[We have met with, in the instance of scarlatina, the bloody urine alluded to by our correspondent, Mr. Adams, the learned translator of the seven books of Paulus Aegineta.—*ED. GAZ.*]

Banchory, Dec. 30, 1844.

POISONING BY PRUSSIC ACID.

To the Editor of the Medical Gazette.

SIR,

AT this time, when public attention is again drawn to a supposed case of poisoning by prussic acid, or some one of its combinations, it may not be out of place to refer very briefly to some experiments in which I have been engaged, with the view of ascertaining the relative poisonous properties of the cyanides, and of determining whether any antidote to their action should be suggested. The particulars of these inquiries I hope to be permitted to detail in a future communication.

As far as my examinations have hitherto gone, I am led to believe, that when we except prussic acid of a strength of 4 per cent., cyanide of potassium is the most virulent and active of all the compounds into which cyanogen enters; it is, moreover, a salt which is very readily procured, inasmuch as it is kept by almost every druggist for the extemporaneous manufacture of prussic acid.

Five grains of this salt dissolved in two drachms of water, and given to a middle-sized dog, occasioned death in about seven minutes, producing all the symptoms of poisoning by hydrocyanic acid: and when it was given in larger doses its action became the more speedy. For instance, in one experiment I gave half a drachm, in solution, to a spaniel, and before I had time to release the animal its effects had commenced; in 13 seconds the dog fell; and in 32 it lay apparently dead. There were from that time no further convulsions; reflex action had for the most part ceased; the eye could be touched without the lid winking, and the sphincters had relaxed. Yet, notwithstanding this, the heart continued to beat for six minutes, and in many instances I have known it pulsate between 8 and 12 minutes after life had apparently terminated.

The constant effects of these poisons, when given to strong and healthy animals, were,—an apparent giddiness; a staggering walk; an effort to vomit; the animal then generally fell, was convulsed, foamed at the mouth, made great efforts at respiration, shrieked, and died, with a strong convulsive action of all the muscles of the body; the eyes stared; the limbs were extended, and the bladder and rectum emptied. When, however, the animal had been previously exhausted, either by bleeding or want of food, death took place for the most part quietly, without much struggling or cry.

In cases of poisoning by the cyanides, there is always a smell of prussic acid in the stomach, whether the body be opened directly, or some time after death. This, I presume, must be owing to the action of the gastric juice upon the salt, which in this way becomes decomposed, and hydrocyanic acid liberated. The base also with which it was originally combined may be detected.—I have the honour to be, sir,

Your obedient servant,

H. LETHBY, M.B.

Lecturer on Chemistry at the Medical School of the London Hospital.

12, Tredegar Square, Bow Road,
Jan. 9, 1845.

PRACTICAL REMARKS

ON THE VALUE OF THE OPERATION OF PERFORATING THE WALL OF THE CHEST INTO A TUBERCULAR CAVITY,

FOR THE RELIEF OR CURE OF TUBERCULAR
PHTHISIS,

With Comments on the Case of J. G.

By E. O. HOCKEN, M.D.

Physician to the Blenheim Street Infirmary, &c.

[Concluded from p. 485.]

THE importance of placing the disease in a state of rest may be gathered from what we observe in other parts of the body. Affections which are in their nature readily curable, even by the unaided *vis medicatrix nature*, will continue and increase for an indefinite period if they happen to occur in parts exposed to constant disturbance, and will at the same time set up severe constitutional and local distress. I may instance abscesses and fistulae in and around the sphincter ani, which are

kept in a state of disturbance from the actions of the sphincter, and which set up a local and constitutional irritation very similar in kind, though less in degree, to the phthisical vomica and cavern of the lung. The surgeon cures these diseases by freely dividing the muscle by an incision from the fistula into the bowel; and in consequence lays open the surfaces in a state of irritation, and sets them at rest by paralyzing the muscle for the time.

The practical inference I have drawn from these opinions is, that it is of little consequence at what part of the cavern the opening be made from without inwards, provided that a free communication be insured; and that therefore it will not always be necessary to select the most depending situation, but that spot where the disease reaches nearest to the surface, and is otherwise most favourably situate for the operation. If the opening has been made in the most depending position there is a danger of the upper part of the cavity being cut off from the lower (with which only a communication exists) by a process of collapse and healing, such as is evidently going on in the case of J. G.; especially if the cavity be a multilocular one: if, however, the tube be introduced sufficiently high, through the chest, to keep up a communication with the upper part of the cavity, there will be no such danger, but it will insure an obliteration in the first instance of its lower part, extending from below upwards; and thus keep up the communication as long as it is either necessary or desirable.

Dr. Hastings, in his report of the case of J. G., states, "that for a considerable period I had come to the conclusion that the great difficulty of curing phthisis in the latter stage, arises not so much from any obstacle that the nature of the disease offers to the healing process, as to the distension and contraction which the sides of the cavity continually undergo from respiration." * * "The primary object Dr. Barry had in view was the discharge of the fluid within the cavity; the removal of the cause of the secretion was my aim." * * "The persistence and augmentation" [of cavities] "result, I believe, as before stated, from the distending and irritating effects of the air within the cavity."*

Although these views differ from

what I have already propounded, inasmuch as I do not attribute the slightest share of any irritating action to the air itself entering or leaving the cavity, and have already shewn that free exposure to the air is the best plan for curing other diseases similarly circumstanced, still I believe, that, acting on them, he would necessarily arrive at the same practical conclusions. The operation of perforating the cavity, also, would by no means alter the relation of its surfaces to the mere atmospheric air.

To what class of phthisical patients is the operation applicable? My experiments with naphtha have convinced me that the remedy, as a general rule (with the exception of small cavities in that form of phthisis where limited crops of tubercles form, become softened, and are expelled before a fresh crop are again deposited) is incapable of producing a cure; and hence we must look to some other plan of treatment in caverns to assist its beneficial action, and place the parts in a condition admitting of cicatrization. But although the majority of phthisical cavities are incurable by any medical treatment, it will be found that only a certain number of cases are adapted for the performance of the operation under consideration; and these only under certain conditions. In extending the benefits of the operation to others it will be as well to consider in order the cases which are, and which are not, likely to be benefitted by its performance.

In the first instance, we must exclude all the forms of acute phthisis—either where the symptoms are from the first rapid or severe, or where a large deposition of tubercle in the lungs becomes suddenly and completely softened and expelled—the lung in either instance becoming quickly riddled with cavities, and the vital powers giving way from the intensity of the constitutional irritation.

In the more chronic varieties the operation is but little adapted to small or moderate-sized caverns, unless they are seated very superficially, are adherent to the thoracic wall, and are increasing in size in defiance of the most careful and continued medical treatment, especially if they do not give rise to much constitutional disturbance. It is chiefly in large cities, where their progress has been slow, where there can be no doubt of firm

pleural adhesions, and where their walls have become identified with the walls of the chest—being situate very superficially—that the operation will be performed with the best chance of success, and under the most favourable circumstances.

It is necessary also to consider whether the operation will be applicable to cases where more than one cavern exists, or where they exist in both lungs. Provided it were satisfactorily made out that only two caverns (favourable in their nature, as I have already explained) existed in one lung, or one in each, or even one in one lung and two in the other, it would not deprive the patient of all chance, provided he possessed sufficient constitutional power to bear the shock of the operations and the subsequent effects. In such cases it would probably be advisable to perform them at the same time, to give the best chance of combating the immediate effects by removing the phthisical symptoms which had previously oppressed him.

But although the presence of more than one cavity would not deprive a sufficiently vigorous patient of all chance of ultimate recovery, yet it would doubtless greatly lessen this chance; and it would require a very mature deliberation, and a consideration of all the circumstances of the case, before the medical man would be justified even in consenting to the wishes of the patient, much less of proposing or urging operative measures. We must remember that there is no choice of remedies; and that the patient, if not relieved by some means (and the operation, in our present state of knowledge, holds out the only possible chance), will most inevitably die. We give patients a chance of life in an otherwise incurable stage of a most fatal disease; and that by means which, at all events, is little likely to hasten death, if it does not prolong it or produce a cure, and which is far from being a very painful or serious matter, even if two or three openings have to be made.

If possible, a favourable period of the year should be selected for operating, yet in many cases it will be found impossible to wait; for either the patient would sink previously, or be in too reduced a state of health to encounter the shock of the operation. I

am convinced that much depends on the state of health in which the patient is at the time of the opening being made. The most favourable time for operating will be when it is clear that no medical treatment can benefit—the disease advancing so as to threaten death at no distant period—and where sufficient vigour is retained to bear, and triumphantly overcome, its shock, and depressing influence.

The practised auscultator will find little difficulty in determining whether the case be one fitted for operation; and first, whether there be more than one cavity in the lung, its size and relations, the stage it has reached, the contents, the conditions of its walls, as well as the probable connexion which exists with the bronchi—as far, at least, as it is possible to determine these particulars during life. If there be two caverns in one lung, the signs of each do not strictly correspond. I examined a patient recently in order to ascertain how far the case was adapted for the operation, who had come to town expressly for the purpose, and who was most urgently desirous that, at all hazards, it should be performed at once. Beneath the acromial half of the right clavicle there was abundant gurgling, separated by a distinct boundary from a cavity beneath the sternal half of the bone, where there existed very powerful superficial cavernous respiration, and complete pectoriloquy, without any moist sounds. A very large empty cavern existed in the opposite lung. My friends, Dr. Hastings (whose case it was) and Mr. Storks, agreed with me that it would be injudicious to perform the operation in this instance till its value had been more fully proved in less unfavourable cases. The size is easily determined by carefully ascertaining the exact limits over which the signs of cavern can be heard. The relation to the wall of the chest (which is a matter of great importance) can be ascertained by the characters of the signs. If in immediate connexion, the sounds are loud, very superficial, and seem to pass directly into the ear of the auscultator through the stethoscope. If lung tissue intervene, the sounds are distant, much less powerful, and more or less obscured. The next point to be ascertained is

The state of other organs.—As pul-

monary phthisis is often to be regarded but as a part of "a great constitutional disease," it is essential to be well informed as to the structural integrity of other important organs. Colliquative diarrhoea is generally to be regarded as an indication of tubercular disease of the intestinal mucous membrane; but I have found medicinal naphtha mostly capable of restraining it, and hence should not regard the operation as absolutely contraindicating the operation. I should, however, endeavour to cure the affection previously, and failing, should regard it as very unfavourable*. Tubercular laryngeal disease would, at all events, require a separate operation for its cure, and hence would, in most cases, detract greatly from the probability of ultimate success. Severe headache, and other head symptoms, should lead us to regard with suspicion the condition of the brain, and we must carefully determine previously the condition of the heart. Should the state of the lung be very favourable for operation, and the evidences of tubercular and other disease exist in important organs, it will be necessary to calculate carefully the probability of such disease itself occasioning death, and the time the patient might gain even if it ultimately proved fatal, and, having stated our candid opinion to the patient, be guided in some measure by the value he sets on the prolongation of life.

It is essential that firm adhesions should exist between the pleura pulmonalis and costalis, and from all I have observed, as well as from the unanimous assertions of the most competent authorities†, I should never be afraid to recommend the operation when undoubted evidence existed of the cavity being of comparatively large

size, and very superficially placed. Mr. Storks suggests that expansion and depression of the intercostal spaces over a cavity, during respiration, cannot take place without adhesion of the pleural surfaces. The spot for making the aperture should therefore be determined by the physical signs, and by the views I have already mentioned.

The opening, I feel convinced, should be made of a sufficient size to introduce at the time of the operation an elastic-gum tube of about half an inch in diameter, with sufficiently large apertures in its sides, slightly curved at its extremity, and about two inches and a half in length. A drawing of such a tube I submitted to the approbation of Mr. Storks in the case of J. G. As tubes of this kind require to be made some time before they will retain their shape, the surgeon should keep a supply by him, and soften that which he intends to use completely, before its introduction, by retaining it about 24 hours in water kept at about 100° F.

13, Bloomsbury Square,
Dec. 23, 1844.

INFLUENCE OF THE NERVES ON SECRETION.

To the Editor of the Medical Gazette.

SIR,

THE other half of the functions of the nervous system, which has hitherto been entirely left out of the calculations of physiologists, consists of the supply of a fluid by the brain to all parts of the body by means of the nerves; in other words, the circulation of the nervous system—a circulation as perfect and complete in every respect as that of the blood through its vessels. There is no novelty in imagining the existence of a fluid supplied by the brain to the nerves, since many of our most esteemed writers have found themselves unable to account for many practical facts, except upon such a supposition, and have consequently argued upon it as confidently as upon any other fully proved premise. Many endeavours have indeed been made to establish the identity of the nervous influence with electricity, and some striking facts have been recorded; it is a point, however, which may safely be left open to future inquiry, because the knowledge of the precise nature of the nervous fluid is of no more importance, as far as the ascer-

* The state of bowels from which J. G. suffered on the 8th of December, is very dissimilar to that produced by tubercular disease of the mucous membrane. My notes state that the patient complained of pain and uneasiness in the hypochondriac and epigastric regions, followed by flatulent disturbance and griping of the bowels. This state was, to a certain extent, relieved by his voiding two stools of a morbidly light colour, but did not entirely disappear till he took the Hyd. c. Cretâ and Dover's powder, which I prescribed for him in the afternoon. The published account of this attack is a condensed and imperfect copy of notes furnished by me to Dr. Hastings. This is a fair specimen of the dyspeptic attacks to which the patient is liable.

† "Louis says, 'If there were no adhesions, neither were there large or medium sized excavations; generally speaking, indeed, there were none of any kind.'"—Trans. p. 36.

taining the various directions in which it flows, than the knowledge of the exact composition of the blood is to the examination of the course which it takes through the arteries and veins. Neither is it of any consequence to determine whether nerves, so fine and delicate, that it is computed that 32,000 are bound up in one cord no larger than a coarse thread, be tubular or filiform, since, if the nervous fluid be *at all analogous* to electricity (which it certainly is), there can be no doubt of its capability of flowing along an appropriate conductor, be it solid or hollow. It is sufficient for my present purpose of describing the course of the circulation of the nervous system, to point out, by referring to the well-known properties of the different kinds of nerves, in what direction they are qualified to conduct any fluid that may be supplied to them by the brain; precisely as it was for that of the famous Harvey, just 200 years ago, to show, by referring to the well-known operation of valves and their position in the heart and veins, that the course of the circulation of the blood was such as, and none other than, that indicated by him.

The first clearly established point to be noted respecting the nerves is, that however intimately bound up together, and apparently mixed, each filament is *single, separate, and independent* in its office: the second is, that no nerve is capable of taking upon itself the function of another; that is to say, *no nerve of volition can become a nerve of sensation, nor the contrary*: the third point is, that as no nerve can assume the function of another, and as volition implies an action from within outwards, and sensation from without inwards, *nothing can take place in either kind of nerve, except according to its proper office*; therefore there can be no reflex action, properly so called, in any nerve. It may to some perhaps appear trivial to insist on such a point as this, but when we find so celebrated an anatomist and physiologist as the late Sir Charles Bell speaking of sensation as being *supplied* to parts by the brain through posterior nerves, which is an impossibility, it must be acknowledged to be one of great importance. The more our knowledge advances, the more precise and significant should our language be: for a grave error may be easily concealed under a loose expression. The fourth

and last point to be noted is, that all nerves except those of the spinal senses *terminate in loops*. Now what are these loops, and how are they formed, becomes an exceedingly interesting question. It is not easy to imagine they can be formed by the ultimate filaments being bent back upon themselves, because if they were so reflected and prolonged even as far as the spinal marrow, the reflected portions, for reasons already mentioned, could not answer any useful purpose, and in the case of nerves of special sensation it is quite certain that the termination in loops is not necessary to the most exquisite perfection of their function, since we cannot conceive any thing more delicate than their sensibility, and yet their extremities are not so disposed. It is fair also to presume that loops cannot be more essential to the anterior nerves in the performance of their office, than they are to the posterior nerves; it is safe, therefore, to conclude that the loop, like the arrangement of the extreme filaments of the general system of nerves, is in no way connected either with volition or with sensation. Now it appears to me that there is, and can be, but one other explanation of the loops, which is that *they are formed in every instance by the union of an anterior with a posterior nerve*. It will be found that this opinion, which I originally put forth nearly twelve years ago, is now confirmed by the dissections of M. Longet, who has distinctly traced such an union of the seventh with the fifth pair of nerves in the face, and who concludes this part of his subject by saying that his "observation, as far as it has yet gone, would seem to render it probable that the nerves of common sensation unite with those of motion in the same way as arteries do with veins; that is to say, that each ultimate filament of a motor nerve originating from the anterior column of the spinal chord, becomes a nerve of sensation at its looped extremity, and as such returns to become united with the posterior column of the chord." I do not consider it at all surprising that the above-mentioned analogy between the different kinds of nerves and the different kinds of blood-vessels should have struck the mind of M. Longet, because it appears to me very obvious; but I do wonder, the idea having once suggested itself, at his having dropped it

again, without pursuing the subject any farther. In reflecting also upon the relation which a nerve of motion bears to a nerve of sensation, the one being *active* and the other *passive*, or, in other words, *positive and negative*, a remarkably striking analogy is seen between them and the opposite poles of a galvanic battery; for if the extreme points of a positive and negative nerve be united as above stated, it is quite certain that the physical means are provided whereby the nervous fluid (be it electric, magnetic, some compound of these two, or *sui generis*) may pass from the one to the other, and operate upon the blood in its transit through the capillaries precisely after the manner of galvanism, in effecting any ordinary chemical decomposition. This idea has been thrown out as a loose thought by Dr. Young, who says, "we may imagine that, at the subdivision of a minute artery, a nervous filament pierces it on one side, and affords a pole positively electrical, and another opposite filament, a negative pole," but without making any attempt to follow it up. I have put the preceding observations together as briefly as possible for the purpose of showing the kind and degree of injury which is inflicted on a part by the division of its nerves beyond the obvious loss of motion and sensation; for of course this wonderful and elegant arrangement for maintaining the secretory function by means of nervous fluid constantly flowing along the anterior and returning along the posterior nerves, *is rendered useless when the communication with the brain is interrupted*.

This view of the nervous circulation, in all parts deriving their nerves directly from the spinal columns, would have been sufficient to enable me to explain the occurrence of inflammation in all such parts, but as I wish also to point out what seems to me to be the true nature of fever, in which all the viscera are so much implicated, and as these organs have no anterior nerves through which they can receive a direct flow of nervous fluid, it becomes necessary to show in what manner this agent may be supplied to the ganglial nerves. If the due performance of the secretory function in the voluntary muscles and general frame of the body requires the constant supply of a current of nervous fluid passing uninterruptedly from a

positive to a negative nerve, it cannot but be still more essentially necessary that all those organs whose office is almost exclusively secretory should be at least equally well supplied, and yet at first sight it would seem to be impossible, because the par vagum being negative nerves, and as such belonging to the posterior columns of the spinal chord, there can be no direct communication *from the brain through them*; their action being in the *reverse direction*. No difficulty was ever overcome by shirking it, and this, which at first appears so insuperable, vanishes as soon as it is examined, with the assistance of the clue afforded by what has been stated respecting the flux and reflux, or circulation of the nervous fluid in the common spinal nerves. If we look to the anatomical arrangement of the visceral nerves, we find them composed of ganglial nerves in company with the divisions of the eighth pair, *i. e. nerves of motion, or positive nerves, united with posterior or negative nerves*, and in this respect therefore standing precisely in the *same relation to each other* as the nerves belonging to the anterior and posterior columns of the spinal chord. Now if we bear in mind what has been stated respecting the reflex current of the nervous circulation which is constantly returning along the posterior nerves towards the brain, coupling it with the fact that it is with these nerves alone that the ganglia are connected, there can be no difficulty in perceiving that a most beautiful provision is made whereby an interrupted current of nervous fluid may be poured into the ganglia, and from them to the extremities of the filaments of the ganglial nerves, again to operate upon the blood as it passes from them to the extreme points of the eighth pair, and again to return along them to the posterior columns of the chord, in the same manner as it had previously done in the common spinal nerves. There are several other peculiarities connected with the circulation of the nervous system which I shall not stop to notice now, because I have shown enough of it to enable me to throw some new light upon the nature of fever, which was the only reason I had for mentioning it at all. I would guard against a misapprehension that may arise from carrying the analogy between the nervous fluid and the blood too far, by observing

that there is this great distinction between these two fluids—the one is the *agent*, the other is the thing *acted upon*. Now the former may effect a visible alteration in the character of the latter without undergoing any change itself; consequently, although an idea of deterioration is inseparably connected in our minds with the term *venous* blood, rendering its immediate return to the lungs indispensable, no such idea ought to be entertained respecting the returning current of the nervous fluid, which, being unchanged, may operate again and again upon the muscles and the blood, producing the same effects at last, wherever it passes from a positive to a negative nerve, as it did at first in the common spinal nerves; just as one circle of galvanism will cause chemical decompositions to take place simultaneously in a series of glass-vessels.

The compass of a letter like this does not admit of my mentioning or even alluding to the hundreds of practical and experimental phenomena which are rendered at once intelligible by the sketch which has here been given of the circulation of the nervous fluid through the spinal and ganglionic nerves. The only farther observation which seems to me to be necessary, and it is important that it should be borne in mind, is that the action of every muscular fibre which, like the heart, is supplied by the reflux current, must necessarily continue while life endures, because the supply of the nervous fluid is incessant, and it must at the same time be independent of the will, this fluid, *in flowing from the posterior into the ganglionic nerves, being beyond the reach of the influence of volition*, which cannot possibly extend beyond the extremities of the anterior nerves.

It is now nearly twelve years since I published my account of the functions of the nerves*, showing the course of the circulation of the nervous fluid, and how the nerves should be classified according to their natural arrangement. It was new, and therefore of course condemned by the critics of that day. The main object of a reviewer is to keep himself quite up to the literature of the day; and with him whatever on the one hand falls short of, or on the other goes beyond his standard, is alike erroneous. Now such an announce-

ment as the discovery of a circulation in the nerves, which scarcely occurs once in a century, takes a man like this by surprise; he is totally unprepared for it; it cannot be right because he forsooth had never dreamed of the existence of any such thing:—his article must be forthcoming by a certain day, so that he has no time to examine it; but as it is not in any of his books it must be wrong; if his wit cannot find him an argument, the last resource, ridicule, is always at his command, and he deals out his condemnation accordingly. The surprising virtues of brandy and salt may receive their share of notice; the absurd doctrine of Hahnemann may be gravely discussed; the pages of the periodicals may help to speed the flight of the lying wonders of mesmerism through the land; but a discovery, the result of years of attentive study, involving a patient inquiry into the whole range of physiological experiment; written so as to be unintelligible except to the purely professional reader, and therefore free from all suspicion of being put forth “ad captandum,” and which, moreover, if true, must inevitably effect a great revolution in the whole science as well as in the practice of medicine, is condemned as unworthy even of examination. Thus it happens that reviewers who profess to have nothing so much at heart as the advancement of science are the very men to deal it the heaviest blows and the greatest discouragement.

I am, sir,

Your obedient servant,

J. W. EARLE.

Cheltenham, Dec. 24, 1841.

SOME OBSERVATIONS
ON THE
MEDICAL TOPOGRAPHY, CLIMATE,
AND DISEASES, OF THE BIGHTS
OF BENIN AND BIAFRA,
WEST COAST OF AFRICA.

By W. F. DANIELL,

Member of the Royal College of Surgeons of
England, &c.

[Continued from p. 437.]

NOTWITHSTANDING the vannted assertion, that man, especially the inhabitants of the northern and temperate zones, possesses in a greater degree than any other race a power of adapting his constitution to the most various climatorial influences, the unprecedented sa-

* A New Exposition of the Functions of the Nerves. Longman and Co.: 1833.

crifice of European life in several of our African colonies would lead us to suspect that this statement has been made on very fallacious grounds. If we contemplate the present condition of these settlements, we shall discover how slightly the lapse of time and labour have diminished the number of victims; how little has been done to abate the causes which create these deplorable results: the ominous title of the "white man's grave" has been but too correctly applied to the countries situated within the tropics in Africa. This apparent inability to resist the peculiarities of the African climate can only be attributed to the operation of certain influences belonging to it, and from the agency of which originate the inordinate derangements of the system that are so familiarly witnessed there. Peculiarity of organization alone does not prevent the prejudicial action of these influences; that there are other and equally efficient, but inexplicable states of the constitution that assist to establish this process, there can be little doubt, since if such had not been the case, the dark races would in general enjoy that immunity from febrile diseases which it is so desirable an object to attain. The natives of the East, and the negroes of the West Indies, with those of the northern and southern States of America, are all subject to the same causes which affect the white individual; nay, even the native African, provided he has resided for any length of time beyond their influence, is not exempt upon his return from their morbid effects. What the nature of the causes or elements are which produce the various abnormal states in the human frame, which we designate under particular names, and what peculiarity of constitution or temperament best fits a man to withstand disease-exciting influences, are comparatively unknown to us.

That portion of the west coast of Africa in which the British settlements are situated, forms but a very insignificant district in the vast unknown regions of a continent which possessed, from the earliest records of antiquity, empires whose fame and magnificence historical tradition has transmitted to us through an uninterrupted succession of ages. These colonial establishments are of modern date, all being founded subsequently to the 15th century, in those

divisions of tropical climate comprehended under the appellations of the Windward and Gold Coasts. The main feature in the selection of the sites has been in all probability their prospective commercial advantages; their salubrity being estimated as of only secondary importance. If such has been the case, and circumstances appear to support it, their rise, progress, and history, will furnish us with the most instructive example as to the fallacy of all mercenary speculations, whose groundwork has been an apathetic indifference to the waste of human life. From the commencement these possessions have proved pestilentially destructive to their white populations, and what from periodical epidemics, and other local affections severely afflicting them, heightened from the influence of fear, with exaggerated embellishments, they have acquired a gloomy character, by no means commensurate to the real state of affairs. By degrees an erroneous supposition has led many into the absurd belief that a residence in these countries is almost equivalent to a premature death, and has readily induced the more timid to suspect that they were merely the representations of so many charnel-houses on a larger scale for all who might have the temerity to reside in them. However merited the application of such titles may be, I question whether there are not other localities equally resorted to by European traders, but not included among our colonial settlements, to which this notoriety may be more reasonably ascribed: I allude to the embouchures of the rivers in the Bights of Benin and Biafra.

It would not come within the scope of the present papers to enter into any details of a subject so comprehensive as the description of the Windward and Gold Coasts: if such had been necessary it would have been merely to exhibit a faint outline of their characteristic features in order to point out those geological formations so widely at variance with that tract of coast which will shortly claim our notice. It must be evident to those who are in any degree conversant with the nature, endemic influences, and other local peculiarities, of the British colonies in tropical Africa, that they enjoy many advantages which render them far more salubrious than the marshy mangrove forests of the

Delta. Land more or less elevated above the level of the ocean, of a silicious gravelly soil, calculated for the percolation of moisture, and partially divested of its luxuriant vegetation, will be manifestly more congenial to unacclimatized constitutions, than the alluvial swamps of the bights which are continually inundated by the influx of the tides. From these extensive surfaces of mud and stagnant water, exposed to the action of a torrid sun, are generated those miasmatic exhalations which militate so much against the preservation of health.

Such are the comparative topographical differences in the colonial and other regions of Western Africa, and from a knowledge of which medical authorities have decided that the Windward and Gold Coasts rank as the most healthy; the Gambia and Sierra Leone settlements* next; and lastly those mercantile stations in the bights of Benin and Biafra.

From a careful investigation into the value of this artificial arrangement, I am inclined to imagine its construction has been based on the two first divisions, deriving their insalubrity more from epidemic visitations, and not so much from other sources as has been too commonly reported. This will partly account for the fearful mortality which has at some seasons nearly

* According to the statement of Mr. Ferguson, the present Staff-surgeon at Sierra Leone, the proportion of deaths to the cases of bilious remittent fever among the troops quartered in the northern African colonies, in the year 1825, were, in the

Gambia . . .	as 1 to 157
Sierra Leone . . .	273
Isles de Los . . .	700

The Statistical Report also of Major Tulloch, in reference to the mortality of 1825-6, perhaps more perspicuously indicates the relative loss of life in each of these colonial governments, and their subordinate dependencies. Of the force employed in them, the deaths per thousand amounted in the

Isles de Los	500
Sierra Leone	650
Gambia	1500

Moreover, in the same publication it is stated, that out of 1658 white troops sent out to these possessions (including that of Cape Coast) from 1822 to 1830, 1298 perished from climatic causes, while the remainder, 387, were invalided, and otherwise accounted for. Now, out of these 387 men, 17 died on their passage home, 157 were described as incapable of further service, and 180 as qualified for garrison duty; thus leaving 33 men only who were reported as fit for further service. There are, however, sufficient grounds for belief, that the civilians suffered less from epidemics than the military garrisons, owing to the adoption of customs more in unison with the nature of the climate, or from other means fully as efficacious.

depopulated these places of their white inhabitants, whilst at others they have been remarkably healthy. The greatest sacrifice of life which has hitherto prevailed in the Gambia and Sierra Leone has unquestionably emanated less from endemic causes than any other. This may be easily proved, from the mortality being notably trifling during the intervals of these periodical epidemics, and by the predominant affections not being accompanied by that adynamic type, as was the case when the bilious and yellow remittent fevers occurred in the years 1823, 1829, and 1837.

Could those causes of disease which have been hitherto ascribed to climatorial alternations be more thoroughly investigated, I apprehend we should discover that no small number were founded on very inconclusive data. It is a well-known fact that the notorious insalubrity of Africa has frequently served as the scape-goat on which the blame of those evil consequences, (resulting from the reprehensive indulgence of dissipated courses) might be unreservedly thrown, without the risk of their being disputed or even questioned. When we seriously reflect on the impaired constitutions of two kinds of the human beings who frequent these wastes recklessly, indifferent as to the price of life, we require no further argument for the rational explanation of those abnormal states of the system that so largely swell the amount of victims in these occasional and almost inexplicable pestilences. As this, however, is a topic of great importance, it will be necessary to revert to it more at length in a future portion of these communications.

I shall now commence the description of those regions situated within that division of Western Africa comprehended under the title of the Bight of Benin; regions by far the most deleterious to the unseasoned European throughout the African continent.

[To be continued.]

CASE OF ABSCESS IN THE ABDOMINAL MUSCLES, AND DISEASED PUBIC BONES.

To the Editor of the Medical Gazette.

SIR,

I enclose the inclosed account of abscess in the abdominal muscles, and dis-

ceased pubic bones, should possess any interest, I should feel obliged by your inserting it in your valuable journal.

I am, sir,

Your obedient servant,

WILLIAM SMITH,

7, Upper Berkeley Place, Clifton, Surgeon.
Bristol, Jan. 7, 1845.

P.S.—Mr. Arnott's cases of abscess, which appeared in your last number, suggested to me the publication of this case, which I have long had in my note-book.

July 1842.—Mary G., æt. 14 years, admitted into the Bristol General Hospital about a week since, apparently suffering from some disorder of the digestive organs. Some time since she received a blow in the pubes, and afterwards she continued for some time unsteady in her manner of walking. After having remained in the hospital for about nine days, an abscess formed under the muscles of the abdomen. Its contents were evacuated by a longitudinal incision in the lower portion of the abdomen.

July 12th, two days after the evacuation of the abscess, she was attacked with all the symptoms of acute peritonitis. In spite of appropriate treatment, consisting in the free use of leeches, mercurials, and opium, she became rapidly worse, and died on the night of July 13th.

On reflecting the skin, the muscles of the abdominal parietes were found to be of a dark greenish colour, and much saturated with pus, which was also infiltrated between them and the fascia transversalis. The bones of the pubis were much diseased. There was very extensive peritonitis, the intestines being glued together by the inflammatory action. The bladder presented on its mucous coat a thick layer of fibrine.

It may be remarked, that this case bears a striking resemblance to some cases of diseased spine, producing psoas or lumbar abscess. Here, however, the proximity of the peritoneum afforded a means of death, which saved the patient the slow exhaustion attendant on spinal disease.

THE ALLEGED MURDER AT SALTHILL.

(For the London Medical Gazette.)

Post-mortem Examination of SARAH HART, by order of JOHN CHARSELEY, Esq. Coroner for Bucks. Jan. 2, 1845, 18 hours after death.

THE deceased was 41 years of age, of small stature, rather spare habit, fair complexion, light hair inclining to grey, pale face naturally.

The body was lying on the floor of the room, as she died; the head on a pillow, jaw tied up. The left stocking was half down the leg, there were no shoes on the feet, and the head was without a cap. The shoes (slippers) and a cap were on the opposite side of the room when the body was found by a neighbour.

The surface of the body was pale, the extremities were rigid, a little animal heat still existed in the fleshy parts of the thighs, the countenance had a calm expression, the pupils were half-fully dilated, there was no odour about the body but the usual cadaverous smell.

The body was next stripped. There were no marks of violence any where discoverable; the under garment was extensively stained with blood. It is stated that deceased never used the usual protection during the menstrual period, and that function was going on at the time of her death.

The thorax and abdomen were laid open. There were rather extensive adhesions of the pleural surfaces on both sides of the thorax, and a white patch, the size of a shilling, on the heart. These morbid appearances were of long standing; the adhesions were very firm, some close, others of considerable length.

The heart was flaccid, but full of blood on the right side; there was no fluid of any description, exceeding the usual serosity, in the pericardial or pleural sacs.

The larynx, pharynx, and trachea, were free from obstruction or disease. The lungs were healthy; no tubercle, induration, abscess, or other disease. The cavities and valves of the heart were perfectly healthy.

There was no odour differing from that of an ordinary dead body in the thorax or abdomen. The closest possible

attention was paid to this point, by the two other medical men who were present, and we were all agreed on this point.

Some adhesions of the convex surface of the liver to the diaphragm existed: they were of much the same appearance as those in the thorax, and probably of consentaneous origin. There was no recent disease. The abdomen was loaded, but not burdened, with fat; its venous system was filled with black fluid blood. The stomach was about half full; the gall-bladder contained but a small quantity of bile; the substance of the liver quite healthy.

The veins of the pelvic cavity were very full of blood, especially those of the ovaria, fallopian tubes, and uterus. This viscus was somewhat increased in volume, and felt rather spongy between the fingers. The bladder was empty, but *flaccid*. The external genital organs were of a bluish cast of colour; they were free from injury; there were no appearances as of connexion having recently taken place. The fore-finger passed up the vagina was withdrawn smeared with sanguineous secretion. The os and cervix uteri healthy. A section of the uterus shewed its structure of a pink hue; the parietes a little increased in volume, and its interior containing sanguineous secretion and mucus: it was *unimpregnated*. The ovaria were healthy. The kidneys were quite healthy; the cortical and tubular portions distinct, and of the usual contrasting appearances.

The œsophagus, stomach, and duodenum, were now removed, and the stomach laid open. It contained rather more than half a pint of pulpy contents; consisting of chyme, with a few shreds of coarse beef (apparently salt boiled), and some portions of apple.

The whole contents had an intensely sour smell, exactly resembling that of food rejected an hour or two after the commencement of digestion from a disordered stomach; but there was no odour that could possibly be considered in any respect like prussic acid. The contents were hermetically sealed for analysis.

Some tenacious mucus smeared the interior of the stomach; there was no unusual vascularity.

The head was next opened. The venous system was filled (not gorged, hardly distended) with black and fluid

blood; there was no extravasation of blood or effusion of serum in the arachnoid sac. The brain was removed: its vascular system was in a state of integrity, the circle of Willis naturally formed. Careful sections of every part of the cerebrum and cerebellum were made: there was no effusion of blood, abscess, or tumor of any part.

The vertebrae were all sound.

The sudden manner of death in this case, and absence of the characteristic smell of prussic acid, naturally led to the inference that if any poison had been taken, it would prove oxalic acid: the usual tests were therefore tried for this poison, but with negative results; and the same may be said of all the ordinary mineral and acid poisons. But prussic acid was unequivocally proved, by chemical analysis, to be present, and in considerable quantity. The processes followed in this investigation will be given at the proper time.

E. W. NORDELADE, Surgeon.

Slough, Jan. 11, 1845.

INCORPORATION OF GENERAL PRACTITIONERS.

To the Editor of the Medical Gazette.

SIR,

THE project for the incorporation of general practitioners in a new College appears to have been welcomed with the highest satisfaction by a great proportion of that numerous body for whose benefit it is designed. They seem to hail it as the means of securing advantages which are not offered them by Sir James Graham's Bill; such as corporate rights, the power of regulating the education of their own class, and the privilege of indirect representation in the Council of Health, in common with the Colleges of Physicians and Surgeons.

All these rights and privileges are regarded by many as very desirable. The proposition is a specious one, and a great struggle will doubtless be made to obtain a charter of incorporation. But, let me ask, have the general practitioners calculated on the probable results of their scheme? Have they counted the cost? Have they estimated its ultimate effect on their position?

They will surely admit that no measure of reform can substantially benefit them, which does not hold out oppor-

tunities to *all*, for attaining promotion and distinction in the ranks of the profession.

Now, under the present system, and more freely by the new Bill, facilities of this kind are offered to every general practitioner.

There is not a village doctor throughout the kingdom, who, if he possess the requisite amount of personal and professional qualification, may not rise to the most distinguished station which the practice of our art can confer. He may become a Royal Accoucheur, or a Sergeant-Surgeon; and the old Colleges of the land open their portals (though somewhat stiffly, it must be confessed) to aid him in his ascent, and to confirm him in his fairly earned dignities.

On the other hand, what will be his position and prospects when he has joined his new College? What assistance will this afford him in his career? To what will the highest offices and honours of such institution lead? What professional status, what public reputation, will they confer?

Whatever else they may do for him, they will certainly *fit* him. To ascend *then* will be next to impossible. He will find himself in a corporate cul-de-sac: a way into it, truly, but no way out.

“Facilis descensus Averni;
Sed revocare gradum, superasque evadere auras
Hoc opus, hic labor est.”

Surely those who are now so eager to enter this embryo College cannot have reflected on their probable condition, either as individuals or as a body, when they are shut into it. “Contentment is a virtue,” which they might indeed endeavour to exercise; but their present restlessness and dissatisfaction rather lead one to expect that in a few years many would see their blunder, and uncivilly turn their backs on their adopted mother, as they now do upon their venerable nurse of Blackfriars.

Let, then, this delusive project be well sifted, before it be pushed too far to permit an honourable retreat to its abettors.

The mass of the profession seem to think that the State is bound to grant them the privileges of incorporation somewhere or other. But the State is under no obligation of the sort. It is, indeed, the duty of a paternal Government both to require that those to

whom it grants a license to practise medicine shall satisfactorily prove their competency, and also to afford all reasonable protection to the practitioners whom it has thus licensed.

If any of these licentiates are ambitious of Collegiate honours and corporate privileges, let them devote themselves to a longer and more extended course of study and preparation; or else let them shew their fitness for the distinctions to which they aspire, by the extent of public confidence which they enjoy.

The modification of the Government Bill proposed in a recent leading article of the *MEDICAL GAZETTE*, and especially the suggestion for the establishment of a *ROYAL COLLEGE OF OBSTETRICIANS*, afford the real solution of the difficulty in which medical reformers, great and small, find themselves involved.

The latter idea is, however, not a new one. In the second volume of the *Provincial Medical Journal* is a letter (dated 15th June, 1841), addressed to the Secretary of the Exeter Hall Conference of Medical Delegates, in which the following passage occurs:—

“The creation of a fourth body in the profession, a College of Midwifery, is a point worthy the deliberate consideration of the Conference. Neither of the other corporate bodies are suited to examine in that branch of medical practice, which is surely of sufficient importance, both with reference to the profession and to the community, to be regulated by its own board. All the Fellows of such a College might be empowered to elect a Council, provided they did not retain the right of voting in either of the other corporations; and the Council might be composed of physician- and surgeon-accoucheurs in equal numbers.”

A golden opportunity now offers for instituting a Midwifery College. For from whom would a charter come so gracefully as from a Royal Wife and Mother? Or who would be a fitter President than the distinguished accoucheur on whose skill and discretion our gracious Sovereign and her attached subjects rely with so much confidence during those oft-recurring seasons of trial, on the issue of which the destinies of this nation may be said to depend?

Establish, then, the College of Obstetricians, and the College of Pharmacists, and we have at once all the elements of a GENERAL LICENSING BOARD; one of simple yet comprehensive construction, the members of which should be appointed by the Council of Health, and its certificate required of all who enter the profession.

Each College would feel the strongest inducement to maintain the respectability and interests of its Fellows, and to promote the advancement of the particular department of medical science over which it would preside; while a race of practitioners, well informed in all the branches of the profession, would be provided for the community.

Consider, also, the calming effect of such a measure on the strife and disaffection which now prevail in the College of Surgeons. There are many members of this College, men of high respectability and extensive reputation, especially in the practice of midwifery, who have been passed over (whether rightly or wrongly is not the question) in the late selection of Fellows, and who have no idea of submitting to an examination in advanced life for the sake of obtaining what to them might prove a merely nominal distinction. Make the *amende honorable* to 500 of the senior of these gentlemen, by nominating them the first Fellows of the College of Obstetricians, and let those who might afterwards seek admission into that College (at the age of 24 or 25) produce evidence of a higher scientific and practical qualification in this department, than would be required of the general licentiates.

I am, sir,
Your obedient servant,
CHIRURGUS.

Jan. 4, 1845.

MEDICAL GAZETTE.

Friday, January 17, 1845.

"Licet omnibus, licet etiam mihi, dignitatem
Artis Medice tueri; potestas modo veniendi in
publicum sit, dicendi periculum non recuso."

CICERO.

INCORPORATION OF GENERAL PRACTITIONERS.

ALTHOUGH it is universally admitted that medicine, as an art, is one and

indivisible, yet in these islands there are no fewer than nineteen different sources of medical honour and privileges, nineteen different modes of education for attaining them, and fourteen varieties of professional rights and immunities attached thereto. In spite of this anomalous condition of things, the general practitioners of England are now bestirring themselves with zeal and energy to obtain a charter of incorporation, so as to form a faculty apart, independent of all others at present in existence. The Society of Apothecaries, as if foreseeing an end to their labours, have avowed themselves willing and anxious to afford every assistance to the licentiates in this their struggle for collegiate organization. Having discharged the duty confided to them by the Legislature, having succeeded in materially raising the character and attainments of the class of general practitioners, the Worshipful Society, irrespective of personal or corporate considerations, are now, after thirty years' probation, prepared to surrender their trust into the hands of their constituents. Previously, however, to taking any decided step, they deemed it proper to consult the Home Secretary, who informed them that "he is ready to receive any mature plan for incorporating a new body of general practitioners; but that before he can form an opinion, or even consider such a project, all the details of the scheme must be laid before him; and the names of the leading persons who promote it, and who are parties to the proposed organization, must be declared."

This expression they have hailed with the utmost satisfaction, and have thereupon at once determined to afford their co-operation in maturing such a plan as may commend itself to the judgment of Sir James Graham, and secure his approval. Unanimity, they very wisely observe, should if possible

prevail on this important subject, "because any material disagreement in principle or detail would afford a strong reason for the Secretary of State withholding his consent to the scheme altogether."

Now while we grant that the Society of Apothecaries have acted with great discretion and liberality in this matter, and that no technical objection can be urged against the measure of incorporation in question, we entertain strong doubts as to any ultimate advantages which the general practitioners of England would derive therefrom. We do not believe it would at all better either their present or their future condition. They complain that the College of Physicians bears no sympathy towards them; that they have been spitefully used by the College of Surgeons, that very College of which the great majority of them are enrolled as members; and they now say, we shall not rest satisfied until we are established as a distinct *third estate*, with rights and privileges of our own. In their present position the general practitioners naturally address themselves to the Society of Apothecaries, who say, mature a plan which may meet the approbation of the Home Secretary; and the Home Secretary, employing the *argumentum ad hominem*, replies in a manner which might be interpreted thus: show me your men; prove to me that they are distinguished for their learning; that they have advanced the boundaries of medical science; that they, as constituting at least nine-tenths of the medical men of this country, have contributed, in proportion to their number, to render it pre-eminent above other nations by progressive improvement in the healing art, by the discovery of new means of alleviating pain, or of remedying disease. In other words, if Government is to found a new College, let good cause be shown for its foundation.

There are some among themselves who do not hesitate to allege that the parties now so zealously engaged in the movement going on here are actuated in their proceedings by hostility to the Royal College of Surgeons, and who question "whether their purpose be, not so much to humble that institution as to promote the *welfare* of the general practitioners*." If such be their motives, their agitation will prove a dead letter. But would the degradation or annihilation of that institution tend to mend matters? By no means. We are convinced that a considerable amount of the public confidence enjoyed by the general practitioners is due to the circumstance of their possessing the diploma of a college from which a Hunter, a Cline, an Abernethy, and a Cooper, emanated. Hence, secession from that body would be more likely to abate than enhance the general estimation they now so deservedly hold.

We entreat our professional brethren to ponder this in their hearts. We would remind them that there is ample room for reform as regards every department of physic. Let us with one accord demand checks, seek for guards, insist on securities against the unlawful encroachments of unqualified pretenders. Let us entrench ourselves behind strong defences, and fortify ourselves, with all care, against the assaults of the ignorant and illiterate, who are now defrauding us of our just gains. But let not the spirit of faction step in and damage the good cause. Nor let it be insinuated that the aim is not so much to put down as to obtain a monopoly of quackery.

SCHOOLS FOR THE SONS OF MEDICAL MEN.

WE augur favourably of a proposal for the establishment of schools for the

* Letter from Mr. Cole, of Bewdley, in Provincial Medical and Surgical Journal of Jan. 8, 1845.

sons of medical men, on such moderate terms of expense as may be consistent with a course of education of a high character; being convinced that preliminary education throughout the English medical profession at large has been long at a very low ebb. An additional argument in behalf of an establishment of the kind is deducible from the fact, that the profession at the present moment is completely overstocked, and many a practitioner is withheld from affording his sons an education befitting their station in life, simply from want of means. While we strongly advocate the prime importance of elementary instruction, we would at the same time caution parents and guardians against bringing up youth for a calling where the chances of earning an honest livelihood are so precarious*. Government might very well impose a heavy tax upon every individual entering the profession during the next ten years, so as to provide a fund for the support of destitute supernumeraries.

The project originated at the annual meeting of the Provincial Medical and Surgical Association, held at Northampton, in August last, and the following gentlemen were nominated as a committee for carrying it out:—Dr. Forbes, Dr. Kerr, Dr. Heygate, Dr. Edwards, Dr. Hodgkin, Dr. Hardwick, Dr. Budd, Mr. Hodgson, Mr. Nunneley, Mr. Daniell, Mr. Wallace, Mr. Martin.

Schools on a similar plan to that now recommended have been founded by members of other professions, as the clergy, and the officers of the Royal Navy, and have proved most useful seminaries for learning.

It is proposed, in the first instance, to raise, by way of capital, the sum of £2000 at least, as the basis on which all their future proceedings must rest; and it is recommended that there should

be three forms under which the required amount of capital should be raised, namely, shares, donations, and benefactions.

“1. *Shares*.—Proposals to be issued for the disposal of three or five hundred shares of the value of twenty-five pounds each; the sum of ten pounds on each share to be paid in at a banker's, at the time of subscription, subject to further calls, as more money may be required.

Shareholders to be of the medical profession; and no subscriber to hold more than eight shares. The transfer of shares to be to medical men only. For each share the subscriber to have the right of nomination for one boy at a time, provided that the full amount of each share shall have been paid up; but no share shall authorize more than five consecutive nominations; nor be available for more than fifty years, unless the original shareholder shall survive that period. And the holder of any number of shares not to be entitled to more than three nominations at a time.

“2. *Donations*.—They propose that an additional amount of capital shall be raised under the name of donations, to form part of the same stock; and to confer privileges during the life-time of the donor, and no longer: but donors to be at liberty to nominate prospectively. The lowest donation conferring privileges to be twenty pounds, which shall confer the same privileges as shares of twenty-five pounds: these donations shall be paid in full at the time of subscription. Donors of fifty pounds to be entitled for life to the nomination of two pupils always in the school. Donors of one hundred pounds and upwards, to be entitled for life to the nomination of three pupils contemporaneously in the school: and the nominations of donors of the largest sums to be entitled to preference. Persons of other professions to have the right of becoming donors, with equal privileges as to right of nomination, with those of the medical profession: but in this, as in all other cases, as subsequently stated, two out of three nominations must be in favour of the sons, grandsons, nephews, or wards of medical men.

“3. *Benefactions*.—As there will doubtless be many members of the profession, who, without wishing to incur the responsibilities and duties of

* See some remarks by Mr. Alfred Taylor on this point, in a former part of this No.—ED. GAZ.

the shareholders and donors, will be anxious to promote the interests of an institution of such inestimable value to their brethren, it is proposed, in the third place, to adopt an additional form for the increase of the capital, by means of independent contributions under the name of Benefactions.

"As no privilege will attach to these contributions, they will bear no fixed amount, but the smallest as well as the largest sums will be acceptable, and will be applied to the promotion of the general purposes of the institution."

The committee consider it advisable at present to prepare for the establishment of one school only, consisting of not less than two hundred, nor more than three hundred boys. The following are the regulations touching the admission of pupils and government of the school.

"1st. Pupils to be admitted by nomination only.

"2d. The sons, grandsons, nephews, or wards, of members of the medical profession, to be eligible for admission at the charge, for board and education, of thirty guineas per annum, with three guineas as an entrance fee.

"3d. The sons of persons, not being the sons, grandsons, nephews, or wards, of members of the medical profession, to be likewise eligible for admission, but at the annual charge of forty guineas; the entrance fee to be the same in both cases.

"4th. Payments to be made half-yearly, in advance, and to include all expenses, excepting for printed books, which will be a separate charge, at prime cost.

"5th. Shareholders and donors not to be allowed to nominate pupils nor being the sons, grandsons, nephews, or wards, of members of the medical profession, in a larger proportion than one in three.

"6th. Boys not to be received before they are ten years of age, nor after they are fourteen; nor to remain at school longer than until they are eighteen years of age.

"7th. Before pupils are received, they are to be approved by the council of the school.

"8th. The course of education to be of a high character, liberal and comprehensive; calculated to produce well principled, well disciplined, and well

stored minds, elevated by religious instruction according to the doctrines and discipline of the Church of England.

"9th. The officers of the institution to be a president, vice-presidents, trustees, treasurer, auditors, and secretary.

"10th. The government of the Institution to reside in a Council, twenty-four in number, being all members of the medical profession, elected from the shareholders and from the donors, with power to apply the capital to the purchase, renting, furnishing, and fitting up of appropriate premises: they shall have the management of the property, and the entire direction of the affairs of the society. The members to continue in office three years; and to go out in sections of thirds, but to be immediately eligible for re-election. The Council to have power, with consent of the president, to add to their number such contributors to their funds as they may deem qualified to render essential service to the institution, subject to confirmation at the next annual meeting.

"11th. The annual meetings of the shareholders and donors to be held either in London, or at the school; or wherever the Council may consider to be most eligible. At such meetings, or at special meetings to be convened by the Council, there will be power to revoke, or add to, or alter regulations, provided that due notice has been given."

Subjoined is the list of subscribers during the last week of November 1844.

Shareholders.—E. Daniell, Newport Pagnel, 1 share; T. Martin, Reigate, 1 share; E. Wallace, Carshalton, 1 share; T. Nunneley, Leeds, 1 share.

Donors.—A. Robertson, M.D. Northampton, £100; T. Martin, Reigate, £100; J. Hodgson, Birmingham, £100; Sir B. Brodie, Bart. London, £100; J. Forbes, M.D. London, £100; A. Hardwick, M.D. Kensington, £20; Sir J. Clark, Bart. London, £100; P. J. Martin, Pulborough, £25.

Benefactors.—The Misses Wallace, Carshalton, £25; E. Wallace, Carshalton, £20.

WE would invite the attention of our readers to an article, entitled "Society and the Doctors," that has just appeared in the second number of "Young England," and to which we may probably refer hereafter.

MOVEMENT IN THE PROFESSION.

A MEETING of the medical profession at Cambridge took place upon the 3d current, R. M. Fawcett, Esq. in the chair. The necessity of some alteration in the laws relating to the medical profession was admitted, and thanks were tendered to Government for having brought the subject before the notice of Parliament: but an opinion was at the same time expressed that the proposed Bill, though containing some beneficial clauses, requires alteration in several important points. A Central Council was approved, while the constitution of the Council of Health and Medical Education was objected to, because no provision is made for the licentiates in medicine and surgery. The annual publication of a register, under the authority of Government, was deemed highly desirable, but the removal of all restrictions upon unlicensed practitioners was opposed, and the adoption of some summary means of restraint recommended. It was further submitted that the graduates in medicine at the Universities of Oxford and Cambridge should not be subject to the necessity of undergoing an examination at the College of Physicians previously to being registered by the Council of Health.

At a meeting of medical practitioners of Aylesbury and its vicinity, held at the Buckinghamshire Infirmary, on the 8th current, Robert Ceeley, Esq. in the chair, several resolutions were unanimously carried. Great disappointment was expressed as to the inadequacy of the Bill. It was contended that legislative enactment should protect the public against the unqualified, and maintain the rights of the qualified practitioner; that the constitution of the proposed Council of Health is objectionable, and the exclusion therefrom of the general practitioner prejudicial to the public and to the bulk of the profession; and that it is necessary to obtain a charter for the incorporation of the general practitioners. A Provisional Committee was at the same time formed for the organization of the "Bucks Medical Association."

MESMERISM APPLIED TO
SURGICAL OPERATIONS,
OBJECTIONABLE.

To the Editor of the Medical Gazette.

SIR,

IN your No. for the 13th January is inserted a letter from Mr. John Chatto on the above subject, in reply to which I respectfully submit a few remarks, premising "that I am as sceptical as most persons as to the ultra pretensions of the professors of the art"—if by this term be understood the conversion (by Deleuze) of water into alcohol, or (by Miss Martineau) into wine, the reduction in a fortnight of a considerable projection of the lumbar vertebrae (vide *Instruction Pratique*), or the elongation in six weeks of a shortened leg some three inches; not forgetting reading with the oeciput or the big toe, the seeing through (imperforate) stone walls, the ghostly translation to Hull of one bodily at Tynemouth, or the clear notions in pathology and therapeutics of a cook or a lady's maid. As to all such pretensions, it surely is not "a very strange procedure, at the present day, to condemn them by *à priori* reasoning alone," when we keep in view the data on which such reasoning is founded! Although "the test of experiment has not been applied" directly and expressly, let us not lose sight of the indirect experiments that we have made, which of course are available on other occasions although not expressly instituted. Our outward senses, given us by Providence to relate us to material nature, are far from being "infallible"—at least, taken separately; each requires to be checked by others, in even ordinary cases, and at times, were it not for the dictates of reason—to which they are clearly subservient—even more senses than one may be deceived, aye, and more individuals than one*. Let us make a just estimate of reason and of our senses, overrating neither at the expense of the other; agree they must, before our faith or confidence can be commanded; and we cannot receive anything in opposition to either the one or the other. As to the "infallible test of experiment," how is it that past experiments are now to be denounced as fallacious? Is our daily and hourly acquaintance with Nature's phenomena, tending over a lifetime to conclusions unquestioned, tested by thousands of our race under such a variety of circumstances, to be spurned, and give way to the mushroom-like and chameleon-like "experiments" of mesmerists? The vast majority of our profession, and of the intelligent public, too,

* See Miss M'Avoy's case at Liverpool, by Dr. Renwick, some twenty years ago.

will answer in the negative. For even among the humble-minded (or would-be-so) who receive in child-like simplicity the evidence of their senses at all times, hazarding no conjectures or hypotheses,—how is it, sir, that our experience of the properties of the eye and its component parts, of the tissues composing the skull and its coverings, and of the big toe, has up to this time been a blank? If so, how can we talk of the “infallible test of experiment?” In short, whether or not the evidence of our senses be worthy of our confidence, such pretensions are at once proved to be false; if our past experience be worthless, much more so must be the experience of our mesmeric friends, for the testimony of our senses can never again be received. Under the semblance of an openness to conviction through appeals to our senses, let us not detract from the authority of reason, nor offer a disguised insult to our senses themselves. We all feel, and practically allow this, as proved by that very scepticism and apathy which the votaries of such a delusion so generally deplore. It would be well for Mr. Chatto and others to hesitate before they speak of “dogmatical and unphilosophical course,” “yielding scepticism,” “culpable apathy, and a want of due recognition of professional responsibility,” or throw out hints and insinuations about “neglected opportunities of alleviating human suffering;” let the advocates of both sides of this and similar questions reflect lest they be caught doing what they themselves so loudly condemn; lest, while indignantly repelling an “impeachment of veracity,” or “a charge of collusion,” they be found stigmatising all who differ from them as devoid of candour, reason, and humanity. To Mr. Chatto, rejecting, as he seems to do, the “ultra pretensions,” the foregoing remarks may appear irrelevant; but they are made under the decided conviction that mesmerism is one entire whole, of which the “ultra pretensions” are the hitherto invariable conclusions—the Charvdis destined to engulf all who may have got within its outer current—scarcely perceptible, but nevertheless centripetal. Shocking to our reason, and contradictory of our experience, as such monstrous allegations unquestionably are, is it not matter of melancholy experience that we cannot trust any one for not ultimately believing, blindly and implicitly, these “ultra pretensions?” Are we not warranted in this speaking, when we refer to the already avowed votaries of mesmerism, and bear in mind their honest worth in many cases, and, more strange and disheartening still, in some instances their intelligence? Looking to the past, I respectfully offer it as my own opinion, that little if any reliance can be placed even on medical men for not finally admitting even

such “ultra-partisans,” when once they have so far forgotten their “professional responsibility” as to give but the semblance of an adhesion to mesmerism, by gravely setting about its examination, unless as a delusion, illustrative, certainly, of the workings of the mind, and of mental influence over bodily sensation and function—the nature of which is still unknown to us; its extent we may call boundless.* What medical man, with these ultra-pretensions before him, and remembering the “conversion” to mesmerism, in all its rankest folly, of but too many “scientific and unprejudiced men,” would be warranted in entering upon “a patient, deliberate, and candid examination into the whole matter?” Where is the proof, nay the probability, or even chance, that “a repetition of the experiments on an enlarged scale” by any body of men whatsoever, “will prove decisive” of such a question, or satisfactory alike to the “credulous” and “deluded” mesmerists, and to their “unphilosophical” and “bigotted” opponents? Have we ever yet seen experiments, observations, or discussions, settle any question of that class to which mesmerism but too clearly belongs? Such matters involve our feelings more certainly and extensively than they do our careful mental efforts; the wish, with each party, becomes father to the thought; conclusions, more dependent in such cases on our mental constitution and temperament,—having been hastily arrived at,—sophistry is invoked, and *quasi*-facts are impressed, to bolster up opinions already adopted, we may say mentally assimilated, by the respective parties; each, feeling but too soon his identification with certain views, flushed at one moment with appearances of success and a prospect of victory, or anon nettled by impending defeat, becomes only less able to retrace his steps as advance becomes difficult; the one, piquing himself on his philosophical acuteness and rational circumspection, is “sorry to see so much excitement and credulity” in his opponent, who, admiring philosophical candour above all things, deplores “the scepticism and apathy” of especially the medical profession. No good ever yet came of arguments or experiments in such a cause; in all such we see the same sort of men upholding—the same kind of men opposing—the same feelings worked upon—the same style of going to work adopted—the same terms and epithets used—the same unsatisfactory termination in every case. The history of one is that of all of them; and instead of any hospital-surgeon entering on such an inquiry as that proposed by Mr. Chatto, I would rather recommend our psychologists and asylum-physicians to embrace

* See Fox's Book of Martyrs, Hecker's Epilemics, McKay's Popular Delusions; also Dupotet and Deleuze.

the present opportunity, among the many afforded by this and every age, to advance our knowledge of mental operations and their action on the body.—“But to do good!” exclaim mental mesmerists, “to alleviate mental sufferings!” Take it, sir, even on this benevolent ground; and it may be a question whether the act is not one of pseudo-philanthropy, one of disguised and unintentional cruelty, just as, under the semblance of an undisputed homage paid to the evidence of their senses, men may grossly insult the same, and prove, by their very display of subserviency, that their adhesion and good faith are never to be relied on. As medical men, know we not of a thermometer bulb placed beneath the tongue, and of bread-pills, &c., having wrought good cures? Would Mr. Chatto for a moment consider the claims “of *mica panis* or a thermometer bulb?” Would he, now, really vote for “a searching investigation into the whole subject by a body of scientific and unprejudiced men?” Surely not; it is of course to be understood that Mr. Chatto, knowing the properties (or rather the inertness) of such means, and that they are the apparent agents only, in a *boué fide* cure, and with his acquaintance of the human machine, its nervous system, its subjection to the mind and imagination, &c. would, like myself, pass from the outward signs to the circumstances under which they were used—the state of mind of the patient on whom, as Mr. Chatto knows, neither the glass bulb nor the bread pills, nor, allow me slyly to add, “the passes,” would act after once their nature was understood; a remarkable difference between animal magnetism and galvanism, bread pills and ipecacuan; and throwing, in my opinion, some light on the curative action of the once much used *brassica oleracea*, of new or costly, or highly puffed, or gravely prescribed remedies—to wit on curative action being of a twofold character or corporeal, and indirectly on the body through the mind and imagination. In therapeutic investigations the former or direct action is generally but too exclusively attended to—the latter neglected, although known and admitted; yet the distinction is an important one, and would save much needless or misdirected labour to many of our brethren—under the heads of mesmerism, diamond-powder, quack-nostrums, hydro-pathy, homœopathy, and newly introduced drugs. These two modes of action may, and should be, separately studied for scientific purposes; their confusion precludes the possibility of our ascertaining precisely the action of a drug, or even whether it have any action at all. The indirect operation of an agent on the body through the mind, so far as the present state of our knowledge enables us to judge, seems to be such as to render it matter of little or no moment

what agent we employ. Although we possess abundance of materials, yet the subject has never been treated apart, or even had a reasonable amount of attention; in my humble opinion this is the most promising chance we have of clearing away many uncertainties of action and discrepancies of writers. However, such a *modus operandi* there undoubtedly is more or less perhaps in every instance of medical treatment; and the question is, how often and how far are we warranted in availing ourselves of it? Opinion varies on the point of course, and as usual we have a stern and uncompromising man at one extreme, a man of great worth and straightforwardness, and opposed to him an amiable and agreeable man; these parties naturally differ; the former speaks of “imposition,” and disdains “such quackery,” while the latter “would never hesitate,” nay “be only too anxious to relieve a patient by any means whatever.” A third, and intermediate section, would discard every approach to deception in the case of the intelligent, but would, to avoid useless argument, or an appeal to harsh means, in the case of an unruly child or an obstinate dotard, have recourse at once to some degree or modification of deception; but of all things, Mr. Editor, whichever course we may pursue, let us never deceive ourselves. To my amiable friends, then, who would say

“And therefore as a stranger give it welcome,
There are more things in heaven and earth,
Horatio,

Than are dreamt of in your philosophy:”

I would respectfully suggest that strangers’ claims be not allowed to shut out those of old and well tried friends—strangers so received and made way for will but feel themselves “tenants at will,” under a capricious landlord.

In conclusion, sir, allow me to insist on the expediency of—First, distinguishing (among “things not dreamt of in our philosophy”) between such alleged facts as are at variance with truths ascertained, as far as facts can be, by reason and our senses, from those which, how novel soever they may be, are consistent with, or at least not contradictory of, our past experience of natural laws and phenomena; secondly, distinguishing such agencies as operate, at all events, directly on the body, as galvanism and ipecacuan, from those that only act indirectly on the body through the mind or imagination, as bread pills, mesmeric ceremonies, and the like; and lastly, of not wincing under harsh epithets applied to us by our over zealous, but doubtless, well-meaning opponents, nor of returning them a Roland for an Oliver.

Apologising for the unusual length of my epistle,

Believe me, sir, respectfully yours,

MEDICUS.

Jan. 1845.

ST. MARYLEBONE INFIRMARY.

To the Editor of the Medical Gazette.

SIR,

I HEARTILY agree with the remarks of your correspondent in the current number of the MEDICAL GAZETTE, on the very considerate and just conduct of the guardians of the poor of St. Marylebone, in having shown a determination to discontinue gratuitous medical services.

But while this independent and enlightened Board has adopted this principle from the fact that paid officers can best be made responsible for the due performance of their duties, I must beg of you to allow me to ask two or three questions as to the conduct of the members of our profession in these affairs.

When the parish guardians want the services of the Law or of the Clergy, do the members of those professions insist on obtruding the offer of their gratuitous services? No. It is unnecessary to multiply the numberless parallel instances.

Then why do the members of our despised and oppressed profession so obstinately persist on the impertinent offer of their gratuitous services? Perhaps you will say, because the hospital surgeons do so. But permit me to add, that this case is utterly distinct from the other. Independently of the pupils' fees to the medical officers of hospitals, these institutions are voluntary charities; while the workhouses are established by law, in which the sick paupers are entitled by the same law to good and sufficient medical attendance, which their guardians are compelled to provide.

Our profession has had to complain of the bitter insult of being put up to Dutch auction. But what better can be expected, when that profession is still more cruel to itself? Does any one imagine the possibility of putting up military, naval, legal, or clerical situations to Dutch auction? Oh no: simply because those professions never have, and never will sanction or allow any thing of the kind.

If a clergyman of our church were to rush to offer his gratuitous services in competition with the respectable paid chaplains of our prisons or workhouses, his insolence would be forthwith put down, after a proper representation, by the bishop.

I beg you, sir, to reflect a moment on what would be the consequence, if inexperienced young lawyers were allowed by the offer of gratuitous or cheap services to usurp the justice seat. No doubt, like young aspirants for doctoring paupers, they might get very pretty practice. But would such a state of things be just to the prisoners, to the public, or to the law profession?

I should like to know whether our pro-

fession can for ever sustain the shocks of such competition. Is it not enough, that it has been assailed from without, but that we must be adding to the misery by a sharp competition to do the business of the rich for nothing, when there is so much real merit struggling for the means of mere existence among the members of our medical colleges?

Your obedient servant,

PHILIATRUS.

London, Dec. 30, 1844.

MORTALITY OF THE METROPOLIS.

Deaths from all causes registered in the week ending Saturday, Jan. 4.

ALL CAUSES.....1417
SPECIFIED CAUSES.....1413

I.—Zymotic (Epidemic, Endemic, and Contagious) Diseases, 260; among which, of—

Small Pox	61
Measles	57
Scarlatina	37
Whooping Cough	30
Croup	9
Thrush	7
Diarrhoea	4
Dysentery	1
Cholera	1
Influenza	3
Typhus	39

II.—Dropsy, Cancer, and other Diseases of uncertain or variable Seat 163; among which, of—

Inflammation	0
Dropsy	33
Scrofula	3
Cancer	29
Atrophy	18
Debility	33
Sudden Deaths	33

III.—Diseases of the Brain, Spinal Marrow, Nerves, and Senses, 196; among which, of—

Hydrocephalus	34
Apoplexy	35
Paralysis	25
Convulsions	56
Insanity	0
Delirium Tremens	4

IV.—Diseases of the Lungs, and of the other Organs of Respiration, 447; among which, of

Pneumonia	140
Hydrothorax	6
Asthma	69
Phthisis or Consumption	137
Diseases of the Lungs, &c.	31

V.—Diseases of Heart and Blood-vessels 45

VI.—Diseases of the Stomach, Liver, and other Organs of Digestion, 91; among which, of—

Teething	23
Gastritis	4
Enteritis	8
Tubercles	14
Hernia	5
Disease of Stomach, &c.	3
Disease of Liver, &c.	4

VII.—Diseases of the Kidneys, &c. 11

VIII.—Childbirth, Diseases of the Uterus, &c. 13; among which, of—

Childbirth	13
Disease of Uterus	3

IX.—Rheumatism, Diseases of the Bones, Joints, &c. 10

X.—Diseases of Skin, Cellular Tissue, &c. 1

XI.—Old Age 110 |

XII.—Violence, Privation, Cold, and Intemperance..... 66

WILSON & OOLIVY, 57, Skinner Street, London.

THE LONDON MEDICAL GAZETTE,

BEING A
WEEKLY JOURNAL

OF
Medicine and the Collateral Sciences.

FRIDAY, JANUARY 24, 1845.

REPORTS OF CASES TREATED IN UNIVERSITY COLLEGE HOSPITAL.

By H. FEARNSIDE, M.B.

Gradual failure of the health for a considerable period, and existence of various symptoms indicating derangement of the cerebral circulation; sudden loss of consciousness, without paralysis, continuing in a greater or less degree for sixty hours; cessation of this state, and development of a neuralgic affection of the loins and lower extremities. Rapid and successful treatment by counter-irritation, iodide of potassium, and generous diet.

JOHN LOVEGROVE, æt. 43, admitted into University College Hospital under Dr. Taylor, May 5, 1843. A tall, and very spare man, of dark complexion; he considers himself tolerably strong, and has generally enjoyed good health; his habits of life are regular; his occupation is that of a tailor, and for the last eight or nine years he has been in the habit of working very hard, not unfrequently from early in the morning until near midnight. For some time past he has found much difficulty in maintaining himself and his family in any degree of comfort; he has consequently been obliged to undergo various privations, and not rarely he has been unable to obtain a sufficiency of wholesome food. He has been a resident in London since the age of 14 years: his father died of dropsy, his mother of old age; neither of them was subject to rheumatism; his brothers and sisters all died when young. He has hitherto suffered but little from any severe illness; an attack of scarlatina, and an injury to his leg having been the sole causes of his being confined to his bed, during the whole period to which his recollection extends; he has, however, had several severe catarrhs, especially during the last two years, and has

on several occasions observed that his expectoration was tinged with blood. For several months past his sight and strength have been failing; about four months ago he had what he calls a "liver attack," suffering much from pain in the lower part of the right side, but he was not jaundiced; about two months ago he caught a very severe cold, from being obliged to part with some of his clothing; he has of late suffered much from mental anxiety, his appetite and spirits have failed, he has frequently had headache, his temper became irritable, and loud noises, or a bright light, were unpleasant.

After the continuance of the above-mentioned symptoms for about three weeks, during which he had undergone much physical exertion, as well as suffered much mental disquietude, he had an attack, of which the following account is furnished conjointly by himself and his wife. On the night of April 23d, shortly after getting into bed, he experienced severe pain in the fore part of the head; the greater part of the surface of the body became hot, but his feet were cold; soon afterwards a profuse general perspiration broke out upon him; he then became sick and vomited; this was succeeded by severe rigors, his whole body being in a state of tremor for some time. Of his state, and of the events which transpired during the ensuing sixty hours, he has no recollection, but his wife informs us that he laid almost motionless in bed, without any stertor or oppression of breathing, and apparently asleep; on being roused, he replied rationally to any questions which might be proposed to him, but very soon relapsed into his previous condition, and in the course of an hour or two he would have completely forgotten the circumstance; he had sufficient consciousness to be sensible to the calls of nature, but refused to take any nourishment. This state appears to have suddenly ceased on the ensuing Wednesday morning, and the first sensation he experienced was one of intense hunger; he afterwards felt exceedingly lan-

gaid, and much disposed to sleep; the senses of sight and hearing were peculiarly sensitive to impressions; he had pain in the head, was thirsty, and there was considerable heat of the body generally, and of the head in particular. On the following day, the pain in the head abated, but he was seized with a violent lancinating pain in the loins, shooting thence to the hips, and down the thighs, the inner parts of which felt benumbed. This pain has continued, and has been so severe as to confine him to bed, but in other respects he has improved, and the febrile symptoms have ceased. When the lumbar pain first sprung up, he suffered from a frequent desire to void the contents of his bladder, and a smarting, scalding sensation in micturition; he had also some pain in defecation; both of these symptoms, however, have since become less annoying. The medical treatment which he has undergone has consisted principally in the administration of purgatives, and the application of cold lotions to the head, and a blister to the nape of the neck.

State upon admission.—The surface of the body is warm; he complains much of languor and debility, and has some suspicion that the right side of the body is weaker than the opposite one, but the difference is by no means obvious. There is considerable tenderness upon pressure on each side of the sacrum, especially near its upper part, and the pain extends from this situation down the posterior (and slightly inner) surface of each leg to the ankle. Pressure upon the sacrum occasions a sudden darting pain in the legs, which also occurs at intervals spontaneously.

He has some headache, and complains of a sense of weight over the eyebrows; he occasionally has the sensation of flashes of light passing before his eyes, and tinnitus aurium; he sleeps well, but feels giddy on first rising; his memory is somewhat impaired; his spirits have been better since than previously to the attack, but his sight has failed considerably.

The chest is of a peculiar elongated form, as if it had been subjected to lateral compression. The ribs are very obliquely placed, with a direction from behind downwards and forwards, and they meet the costal cartilages by an obtuse and prominent angle; the sternum being sunk in a depression. The cartilages of the false ribs of the two sides are approximated so as almost to meet, and there is about a hand's breadth only between the lower border of the tenth rib and the umbilicus. One of the patient's children has a similarly shaped thorax.

He has no cough, dyspnoea, or pain about the chest; the right side appears to move less than the left one in breathing; number of respirations, 18 per minute.

Percussion upon the clavicle elicits a clear sound upon both sides of the chest, but more so upon the right than the left; under the right clavicle the sound is duller and the vocal fremitus stronger than beneath the left one. The *respiration* is bronchial below the right clavicle, and the inspiratory murmur loud and rough below the left one. The sound on percussion is dull over both supra-scapular regions, the dullness extending lower upon the right than upon the left side; the breath sound is somewhat bronchial in the same situations, especially upon the right side, and during expiration. There is nothing abnormal about the sounds or impulse of the heart; pulse 80, soft, and compressible.

The tongue is moist and rather furred in the centre; he has some thirst, no nausea or sickness; appetite good; bowels open; urine pale, sp. gr. 1009, slightly acid, unaffected by heat or nitric acid. There is no enlargement of the liver or spleen.

Treatment and subsequent progress of the case.—The patient was directed to take four grains of Iodide of Potassium three times daily, and was placed upon full diet. For some days he continued to complain of heaviness of the head, especially in the occipital region, indistinct and perverted vision, as well as of the pain in the lower extremities, which he compared to that which would be occasioned by the passage of an electric shock through the parts, occurring in paroxysms which often succeeded each other with great frequency for ten or fifteen minutes, and then subsiding would leave him at rest for an hour or more. This pain was especially induced by motion; its removal appeared to be promoted by the use of a strong ammoniacal liniment, with which friction was made over its seat; and this, with the gradual increase in the dose of the Iodide of Potassium to eight grains, constituted the whole remedial treatment; under the employment of which the patient progressively improved, so that he was able to leave the hospital in a little more than a fortnight after his admission. The Iodide of Potassium appeared to produce no obvious effects on the system, unless a copious night perspiration which the patient experienced during his stay in the hospital was connected with it. The appetite continued exceedingly good, the bowels acted regularly, and the sp. gr. of the urine rose from 1010 to 1015, but on several occasions it appeared to contain an excess of the salts of phosphoric acid.

Although at the period of his discharge, the more prominent symptoms were either removed, or greatly mitigated, those referable to the organs of special sense persisted; vision remained less distinct, and hearing less acute, than they had been previously to the attack.

Remarks.—The *diagnosis* in this case was rendered less precise than it would have been, from the fact that a considerable interval had elapsed between the date of the patient's attack, and that of his admission into the hospital. It appears from the history that for some months his health had been failing; he had been subjected to privation and much mental anxiety, had lived poorly and worked hard, his employment being sedentary, and necessitating a stooping position of the body. It was not, however, until the evening of April 23d that these causes issued in the production of any marked result. The affection, an account of which is detailed above, was clearly one of the nervous system, and appears to have had its origin in cerebral congestion. It bears a close analogy to the group of symptoms described by M. Andral* as characterising what he describes as the second form of this pathological state, viz. sudden loss of consciousness, with or without preceding giddiness, but without any distinct paralysis. This may continue from some minutes, up to thirty hours, and is succeeded by rapid recovery without any lesion of sensation or motion, although there may be, for a few days, a little difficulty in the performance of the functions of relative life.

This view is confirmed by the nature of many of the symptoms of which the patient complained when he first came under our observation. The headache, somnolence, slight impairment of the intellectual faculties, and hebetude of some of the senses, are what might be expected after prolonged disorder of the cerebral circulation. To these may be added another symptom to which the patient made reference more than once, a sense of weight and oppression in the back of the head; a situation corresponding to the great confluence of venous blood in the torcular Herophili.

The tenderness on pressure over the sacrum, and the pains in the legs, appear to have been a neuralgic affection. It was not articular; the patient had no predisposition to rheumatism, and had not been exposed to the usual causes of that disease. On the other hand, the suddenness with which it sprung up, its severe paroxysmal character, its following the course of the nerves, and the fact that pressure upon the sacrum occasioned lancinating pain in the legs, strongly support the former supposition. Again, before and at the period of the patient's admission, several of the symptoms of what has been designated "irritation" of the lower part of the spinal cord were present, such as frequent and painful micturition and defecation.* Moreover the previous habits and mode of life of the patient were

well calculated for the development of undue nervous sensibility.

The signs obtained by a physical examination of the patient's chest, the diminished motion of the right side, the dulness on percussion over the right infra-clavian space, and both supra-spinous fossæ, the increased vocal fremitus under the right clavicle, and the bronchial respiration heard over the same part, pointed unequivocally to the existence of some condensation in the upper parts of the lungs, and of the right one in particular. From the fact that the patient had been failing in health for some time, that he had on different occasions expectorated blood, and from other circumstances connected with the history of the case, there appeared equally little reason to doubt that this was owing to the deposition of tuberculous matter in the situations just indicated. It is worthy of remark that during the time that the patient was under observation, there was an entire absence of any general symptoms leading to the inference that the lungs were diseased.

The *prognosis* in this case cannot be considered as very favourable; under a continuance of the same causes which led to the first attack, a second and aggravated one may be anticipated; or if placed in more favourable circumstances, and should the tendency to cerebral disease be kept in obedience, there remains the pulmonary affection, which it is but too probable will continue to advance.

But little need be said relative to the *treatment* of this case, as the history furnishes the best comment upon it. Under a liberal allowance of food, counter-irritation upon the spine and legs, and the internal administration of Iodide of Potassium, the patient rapidly improved, and was sufficiently well to leave the hospital in seventeen days after his admission.

ON THE PRESENT STATE OF THERAPEUTICAL INQUIRY.

BY JAMES ARNOTT, M.D.

Physician to the Brighton Dispensary.

[Continued from page 481.]

AFTER the illustrations which have been given of the principal sources of therapeutical knowledge, it remains to inquire what influence theory has had as respects our knowledge of remedies. If the explanation of the morbid condition rest solely on mechanical or chemical principles, the appropriate

* The urine also had the characters usually seen in nervous affections; it was pale, watery, of low specific gravity, and often contained an excess of the phosphates.

remedy may, as has been admitted, originate from such explanation; but what is called the theory of medicine, or pathology, and which consists principally in an explanation of the elementary forms of disease, such as irritation, congestion, inflammation, tubercle, spasm, &c. usually implies, a consideration of the laws of vitality, and the functions of the nervous system. In this sense it would be an easier task to shew the mischief theory has occasioned than to collect the instances of its direct advantage. Nor can the important disclosures of morbid anatomy, with regard to the existence and analogy of diseases, be regarded as more than part of the foundation on which theory of this description has been built*.

Theory has had a higher character than it deserves in this respect, from improvements having been attributed to it which really proceeded from other sources. We have an instance of this in a remedy which has been already adverted to. The opinion is still commonly entertained that the discovery of artificial respiration as a means of recovery, or even resuscitation, from the effect of narcotic poisons, originated from theory. It is true that a plausible theory may have drawn public attention to the subject (and this is one of the advantages of theory), but the discovery proceeded from no such source.

* As the removal of the continued operation of the cause of a disease is frequently a very important part of the treatment, the great progress that has been made in our knowledge of etiology must be considered a direct improvement of therapeutics, arising from the correct induction of facts, and the advance of physical sciences. This knowledge is about to be turned to practical account as respects drainage and ventilation; and other benefits of a similar description might be obtained by the interposition of government. The spreading of contagion, for instance, could often be prevented by a little more care on the part of the medical attendant. The plan of the self-supporting dispensary, properly carried out, would, by making it the interest of the medical man to prevent disease, be well calculated to effect this. For criminal negligence, gross ignorance, or intentional concealment, as respects contagious disease, there ought to be an adequate penalty.

The great advance that has been made in our knowledge of the means of warding off the causes of disease is alone sufficient to confer dignity on medical science. But in apportioning honour for discoveries in prophylactics, the claims of several persons, unconnected with the profession of medicine, must not be forgotten. We are indebted to Captain Cook for showing how the health of seamen may be preserved; and a similar obligation will, I have no doubt, be hereafter acknowledged to Mr. Chadwick for his valuable researches relating to the health of the poorer classes in towns.

It was probably the analogy between the state produced by narcotic poisons and the state of suspended animation from drowning, which led Mr. Whately to the employment of artificial respiration in the remarkable case communicated by Dr. William Hunter to the Medical Society of London, and recorded in the sixth volume of their "Medical Observations and Enquiries." But because Mr. Whately was not an "authority," as has been remarked in the first paragraph of this paper, as he had no connexion with any celebrated school, and because, perhaps, his important facts were not supported by plausible theory, the practice of which he had thus most clearly shown the efficacy, was not adopted, and, it may be, his statement was not generally believed. Twenty years afterwards, and when the splendid discoveries of Bichat on the relations between the functions of the brain and heart had drawn the attention of the profession to the subject, the inquiry was revived by Sir Benjamin Brodie, and his theory of the *modus operandi* of the remedy being more in accordance with modern notions than that advanced by Mr. Whately, the truth became established*.

But theory has other and greater uses than drawing attention to important facts. Until more facts are accumulated, and the legitimate deductions from them are made, it would be a very difficult matter to conduct the treatment of any case of disease without more or less assistance from theory. Those practitioners who value themselves as being purely "practical," and who may think that, as respects themselves, there is no necessity for inculcating a closer

* The history of this invention is a curious illustration of what I have said respecting the discouragements of therapeutical inquiry in the first paragraph of this paper. So little was known of Whately's proceedings in the matter, notwithstanding the celebrity of the person who communicated his facts to the Medical Society, and the reputation of their printed Transactions, that the credit of the discovery was generally given to Sir Benjamin Brodie, who, at that time at least, was only more secure of public attention by the accident of his connection with the school founded by the illustrious man on whose recommendation probably Mr. Whately's paper was communicated to the public; and, in consequence of Sir Benjamin's credit on this account, more weight was attached than might otherwise have been the case to the inferences drawn from his unfortunate experiments regarding animal heat. They were unfortunate, as, by giving a wrong bent to inquiries on the subject, they have deprived this country, where it originated, of the glory of completing the chemical theory of the source of animal heat.

alliance between medicine and the Baconian philosophy, are nevertheless much indebted to theory; not only for maintaining the confidence of their patients by its suggesting plausible explanations, but for enabling themselves consistently to continue the administration of drugs. They may, indeed, regard with contempt the great and fashionable theories of the day, but they seldom employ a medicine without some reference to a theory of either ancient or modern date; for it has ever been held to be essential to the recommendation of a remedy not only to give experimental proof of its value, but to assign a plausible explanation of its action.

Again, the apologists of theory maintain that without its assistance the important facts in therapeutics could not be kept in connection so as to be remembered by the practitioner; it is called the string by which the bundle of facts are kept together. But if some connecting means is essential, it were surely better to impress the important particulars on the memory by collecting them in metrical lines to be got by heart, than by the aid of a false theory. It is, indeed, a wonder that the industrious class of writers who profess to cater for short memories, should not have, long ago, substituted some such plan for their vade-mecums on diagnostics, toxicology, and other departments of medicine abounding in facts which have little natural connexion.

Theory, as springing from so many collateral sciences, has been supposed to confer dignity upon medicine, and to distinguish more certainly the well educated practitioner from the mere empiric, a character which it has owed to the greater study its acquisition implies. But were theory altogether banished from medicine, the difficulty of the student would be increased, instead of being lessened. Extensive observation and induction of facts must then be its substitutes, and far greater powers of mind are required for these than were required for spinning the ingenious theories that were formerly so much in fashion. Physiology is, however, now fortunately so far advanced as to render the construction of plausible hypothesis a more difficult task than it used to be; and it is more likely, on this account, to demolish

ancient speculations of this kind than build up new ones.

What is wanted, then, for the progress of therapeutics is a collection of well authenticated facts relating to the cure of disease. If different practices are in use for the cure of a particular disease, let a sufficient number of instances, where the morbid conditions are nearly similar, be chosen for comparison, and let that be afterwards preferred which is thus proved to be the best. It is possible, however, that two different practices may be equally good, or, at least, that they may appear so to our imperfect perception.

To return to an illustration already given: inflammation of certain parts may be relieved either by removing the pressure made on them by fasciæ or the integuments, in the manner described; or, singular as it may appear, by increasing that pressure. Both practices have been in use for the cure of phlegmonous erysipelas, and other analogous diseases; and were the pressure perfectly equable, such as that which is produced by a fluid, it might be difficult to determine, even in perfectly similar cases, which practice is best. The treatment of gout and rheumatism by pressure would probably have been more successful, had a better mode of producing it been adopted. In applying this remedy to such cases, not only has the pressure been unequal, but the regulation of the temperature of the part has been neglected. Both of these errors were avoided in a case lately under my care. A lady had been affected, for several months, with a diffused pain and tenderness in the forearm, preventing the use of it, and causing sleeplessness at night. The affection had been termed, and probably correctly, a diffused chronic inflammation of the cellular membrane. It had resisted a variety of remedies, amongst which a bandage, applied with the greatest care, had held a prominent place. I wished to have an apparatus of Macintosh cloth prepared, for applying equal pressure; but as the greatest anxiety was expressed that something should be done without delay, I substituted the following expedient:—Two tin collars, or bracelets, were procured, just large enough to slip over the arm; and a circular piece being cut out of both ends of two large ox-

bladders, they were firmly tied upon these collars, one over the other. Two small pieces of brass tube were tied into the outer bladder, for the purpose of conveying liquid to and from the space between them; and in order that this space should not be wider than was requisite, as well as for the purpose of giving strength, the bladders were covered with a piece of cloth, in the form of a sleeve, which was likewise tied at both ends to the collars. The temperature of the water which passed in a slow current through the space between the bladders was at first that of the body, but was gradually reduced to as low a degree as the patient could bear with comfort. The degree of pressure was regulated by the same criterion; it was generally that produced by keeping the end of the waste pipe about a foot above the arm. In less than two days so much relief was experienced as to render the continued application of the apparatus unnecessary. There was, towards the end, an oozing of water from the bladders, which made it necessary to rest the arm in a sort of trough; but this inconvenience would not be experienced in the use of a more lasting material*.

If, in inflammation, the capillaries are in a dilated and weakened state, as pathology teaches, it would necessarily follow, that were a degree of pressure sufficient to prevent this dilatation applied to the foot in gout as soon as the premonitory symptoms made their appearance, its inflammation would be prevented, and experience of the curative agency of equal pressure would corroborate this opinion. Such a practice would, indeed, be forbidden by a fashionable theory of this disease; but may not those who require so very high a degree of action in the extremities, as the means adopted by the *vis medicatrix* for eliminating the poison, find elsewhere, and by artificial means, an adequate substitute for it? Besides, does not the administration of colchicum, the favourite remedy for gout, oppose the same theoretical views? Let us select hernia for another exam-

ple, as the principle of surgical therapeutics is more intelligible than the *modus operandi* of medicines. What confusion still exists in the preliminary treatment of strangulated hernia! A dozen different plans present themselves to the practitioner's attention, and he is puzzled which to prefer, how to combine them, how long to persist in the use of each, or to what extent, or to fulfil what indication, he is to carry it. As respects the last question, is he, for instance, by the use of the enema, to endeavour only to evacuate the lower bowel; or, by distending that part of the intestine which is immediately under the strangulating ring, in the manner I have lately suggested, and as has been practised in supposed intussusception, is he to endeavour to withdraw the strangulated portion?

Where every practice hitherto adopted in particular diseases has proved unavailing, recourse must be had to the great sources of discovery which we have noticed. These will, at this advanced stage of the art, generally supersede the necessity of the strictly empirical use of remedies. Yet while the conscientious practitioner is thus restrained from empiricism, he need not shut his eyes upon the experiments which are daily being made upon their dupes by rash and unprincipled men. If the persons who, from credulity or despair, are willing to become the subjects of such experiment, fail in obtaining advantage for themselves, an accurate observation of the effects of such practices may, by promoting medical science, be of the greatest importance to their fellow men. Had homœopathy been in fashion fifty years ago, and its effects been closely watched by competent observers, there can be no doubt that the destructive use of mercury in syphilis would much sooner have been abandoned. Charlatans had, indeed, long advertised their skill in curing this disease without mercury; and there can be now no doubt of the correctness of their assertion; but, unhappily, the regular practitioner would not stoop to examine the results of their practice.

Homœopathy, hydropathy, and mesmerism, or the means of strongly influencing the imagination and bringing the hysteric diathesis into play, are all great systems of experiment;

* Some observations on the construction of an apparatus for the external application of fluid pressure may be found in the appendix to the writer's "Treatise on Strictures of the Urethra," p. 217.

but as those who practise them are men in whose assertions the profession do not confide, they are nearly useless as respects any scientific purpose*. These practices are condemned by the profession; but do the indiscriminate courses of mercury, iodine, colchicum, or of purgatives, either artificial or as they exist in mineral waters, prescribed by regular or at least licensed medical practitioners, deserve a much higher character? They are equally systems of experiment, and the only advantage they have over the others is, that the experiments have occasionally been made by men of some education, and who may be able not only to profit by them themselves, but to place the results before the profession in a credible form.

For the observation of therapeutical facts arising in the ordinary practice of medicine, our larger hospitals are the best field. That more advantage has not been obtained from the opportunities which these establishments afford, arises, I conceive, from two causes. The first is, that the persons connected with them, and who may be fully competent for the task, being otherwise much occupied, have not had the leisure to furnish sufficiently comprehensive reports of the progress of diseases under the effects of remedies; the second, that the reporters being usually either the persons themselves who prescribe the treatment, or persons under the influence of the prescribers, as their teachers or patrons, their reports have not that stamp of truth which is essential for their utility. The practitioner who conducts the treatment is too apt to be himself deceived; he only looks for, or duly observes, what is consonant to his own opinions; and his reports, from omitting other circumstances, and attaching undue importance to these, deceive others. How otherwise, than by such

self-deception, can we account for the fact of the extreme rarity with which particular remedies or lines of practice commended by authors of unimpeachable veracity, the commendation being supported by the details of numerous cases, have been found to answer the expectations of others who have on such testimony tried them? To suppose that these authors suppressed the cases unfavourable to their views would be to accuse them of dishonesty, quite as much as to suppose that they had knowingly distorted or omitted important circumstances in the cases which they have related. Reporters should not only, by their acquirements and leisure, be able to afford complete and accurate descriptions, but, by their being unprejudiced and disinterested, assurance must be given that the facts related are not distorted. Were methodical reports of every important case falling under their observation, to be furnished by a body of well-educated men and philosophical observers attached to the public hospitals, but who had no connection either as pupils, assistants, or dependents, with the medical officers of the hospitals, how valuable would such information be for instituting comparisons between different modes of practice! Were the reports of men of this character, in whom the profession would have full confidence, drawn up on a uniform plan, so as to admit of easy comparison, and either published or sent to some central institution, where they could be consulted at leisure by writers of monographs, or persons investigating particular diseases, how rapidly would useful medical knowledge advance! Every student would then, it may be said, have the door of every hospital thrown open to him; for excepting the expression of the countenances of the patients (and ere long the daguerreotype will perhaps transfer this to the case-book), every circumstance of importance, and some which he himself might omit to notice, would be vividly brought before him by the graphic report.

* If Sir James Graham persist in granting impunity to quacks, it is to be hoped that he will at least insist on their congregating their patients in hospitals under proper inspection, where, for the benefit of science, their experiments may be witnessed. And it is to be hoped that he will, at the same time, devise some better plan for distinguishing the licensed from the unlicensed practitioners than registration; seeing that, in consequence of the extraordinary proceedings of the Council of the College of which the greater part of the former are members, in relation to their newly-granted charter, not a tithe of these will be willing, by the act of registration, to acknowledge their connection with it.

The boards or councils of medical colleges or corporations, did they consist of men respected and confided in by the profession at large, might dictate a certain form of report, and even usefully appropriate part of their funds to defray the expenses incurred by the institution of comparisons between

the several practices, or the drawing up of results in a tabular form*. It is unnecessary, however, to enter upon the subject of the best mode of drawing up medical reports. Of late years this has been well considered, and correct conclusions respecting it have probably been arrived at; but it may not be so needless to intimate, that in all that respects the effects of remedies which require some skill, or attention at least, in their application, notice should be taken whether due skill or attention has been exhibited. For example, in the application of ointments or lotions to diseased canals, it is of much importance as respects the remedial effect that every part of the diseased surface should be subjected to the remedy; but this is rarely done, and then only by accident. Solid substances may often be applied either in the form of, or as a coating to, a bongie, of a size suited to the diameter of the canal; liquids by being made to distend a permeable tube of the same shape. I have succeeded, by attention to this, in speedily curing disease that had long resisted a variety of applications made in the usual imperfect manner.

The different results following a difference in the mode of bleeding, which have already been adverted to, is another illustration of this point. Nor are these confined to general bleeding; even the temporary abstraction of blood from the circulation which is effected by dry cupping requires that the mode in which it has been accomplished, or the extent to which it has been carried, should be minutely mentioned. Dry cupping may, from the number of cups applied, be either the mere placebo generally applied, or form an efficient means of revulsion of great value where (as in many cases of apoplexy and congestion of the brain) it is important to remove a certain quan-

tity of blood temporarily from the circulation, and yet not reduce the powers of nature beyond that degree which may be necessary for her curative agency. By the adoption of an expedient which I have recommended, of sticking a bit of lint or other bibulous substance to the bottom of a common beer glass by sealing-wax, and afterwards dropping a little strong spirit upon it, for the rarefaction of the air by combustion, an opportunity is afforded to the most inexpert operator, and in almost any situation of emergency, of covering the body with cupping-glasses, and without the usual pernicious delay. Such a plan would, in some respects, be preferable to using the large cupping vessels for enclosing the limbs, lately introduced into practice under the auspices of the French Academy of Sciences; and it might be assisted by another old expedient, lately revived, of detaining the blood in the limbs by encircling them with bandages*.

While the editors of medical journals would find reports, such as have been described, very acceptable to their readers, there would be no want of applicants for the office of hospital reporter or recorder. The opportunity for gaining knowledge, if not zeal for science, would be a sufficient inducement; and any temptation which the indolent and unqualified might have to hold the office, on account merely of its being a means of promoting their interests by the reputation it might confer, would be restrained by the obligation they would be under of furnishing complete and methodical reports for public inspection. The patients in the hospitals would find a

* A board so constituted might, with great advantage to medical science, adopt the practice of the French Academy of sciences, of furnishing the profession, from time to time, with reports upon new proposals in therapeutics, or alleged discoveries in science, submitted to their judgment. But for the encouragement of the French Academy, the general substitution in certain cases of a safer operation for lithotomy—a substitution which, though it originated, was neglected in this country—would probably not even as yet have taken place. The French appropriation of this improvement, however it may affect private interests, is of no importance as respects the great interests of humanity.

* Until very lately, the same effect was produced by the tourniquet in amputation; and even now, when an improved mode of compressing the artery is in use, there is often loss of blood from this operation sufficient to turn the scale against the patient's recovery. It may have been mainly to this cause, that the recent and lamented death after amputation of a highly promising surgeon of Brighton is to be attributed. There had been profuse hæmorrhage previously to the operation, rendering it of the greatest importance to prevent any further efflux of blood. Were the blood squeezed out of a limb by pressure methodically applied for this purpose, previously to amputation, so disastrous a result might be prevented; and there would then often be, proportionably, more blood in circulation after the operation than before it. Might not such a compression of the extremities and of the abdomen, so as to determine the blood to the upper cavities of the body, be of service in that class of cases for which the transfusion of blood has been recommended?

direct and immediate advantage in the attention of their attendants being often drawn by such reports to circumstances which they might otherwise overlook; and the medical officers, while they likewise would have an advantage from this, would not fear any criticism of the reporters, or any consequent loss of reputation, as adequate means would be resorted to, before their entering upon the office, to prevent any such dishonourable interference. With this precaution there might be great utility, from the recorder's expressing, in a separate form, his own opinion of the nature and suitable treatment of the diseases of which he reports the cases; an opinion which the medical officer who regulates the treatment might either coincide with or reject, according to his judgment.

Such a plan might perhaps, in many instances, and with some modifications, be advantageously substituted in private practice, for the present system of medical consultation. No practitioner will refuse assent to the proposition that another opinion, even in the commencement of any important case, would be highly satisfactory to him, whether it be confirmatory or emendatory of his own opinion, for every one must experience some anxiety under these circumstances; and as regards the patient, it may be of the greatest consequence—in the one case producing perhaps a greater decision in the line of treatment adopted, on which the patient's speedy recovery may depend; in the other, causing an alteration of treatment which may be absolutely requisite for the cure. Yet how rarely can such consultations be held! Their rarity, and the notorious fact that they are seldom had recourse to, unless great danger, either immediate or remote, be apprehended, often prevent the medical attendant proposing such a course, lest alarm should be created. Why medical consultations, as they are at present conducted, are not sought for in the earlier stages of disease, and why, when desired by the patient or his relations, they are sometimes resisted, it is needless to inquire; but were the person consulted to be restrained from all improper interference in the manner proposed as respects hospitals, and were he restricted to a mere verbal or written opinion expressed to the medical attendant, the

usual objections would not hold. There would, besides, be this advantage, that the medical men in consultation would have no inducement to make any pernicious compromise of opinions; the attendant on the case feeling himself perfectly at liberty, either entirely to adopt, or entirely to reject, the second opinion.

Besides the advantage to the profession generally, arising from their access to these complete and faithful reports of disease, it would follow, by the measure of increasing the number of offices at our hospitals, that a greater number of members of the profession would have the opportunity of benefitting by the direct observation of disease. It is a general fault in the present management of these institutions to appoint too small a number of medical officers—too small even for the duties required of them; those who obtain the appointments have their interests of course promoted by this arrangement, but those who are excluded, and who are often men of more merit and modesty than their successful competitors, are treated with injustice. The appointment of a body of reporters to each hospital would tend to rectify another and a very glaring defect in the present system. A fair opportunity of distinction would be afforded to the younger men in the profession, and their reports would furnish the best test which an impartial and competent committee of the governors (to whom the election of medical officers ought to be confided) could desire, to guide their choice on vacancies occurring amongst the prescribing medical officers. How desirable is it for the interests of the poor, and the character of the profession, that some such test should be adopted! For the interests of the poor; because able men would then be their medical advisers, instead of those incompetent persons whom mere good fortune and family connection so often thrust into such places; for the character of the profession, because an end would be put to the practice of distributing testimonials of character and scientific acquirement amongst a whole host of governors; testimonials in which, by the publication of their titles, &c. the interests of those who eulogize are frequently as much consulted as the interests of those on whom the eulogies are conferred; for (as we

have remarked on another occasion) the praises of pupils in testimonials, and the newspaper puffs of plasters, too often in this respect belong to the same category*.

One immense advantage of thus recording medical facts by impartial and talented observers, would be the cessation that would thence ensue of the pernicious influence of authority, than which nothing has more retarded the progress of medical science. It would become imperative on every practitioner to make himself acquainted with facts, and to draw his own conclusions from them. It could no longer happen that men, who from a variety of accidents may have acquired an authority with the profession, to which neither their talents nor their acquirements entitle them, would be permitted either to dictate objectionable practices of their own, or successfully to oppose the introduction of the better practices of others.

In the above remarks on the present state of therapeutical inquiry, I am well aware that the practical suggestions which I have introduced in connection with several of the illustrations, must have interrupted and perhaps enfeebled my argument; but I was unwilling to omit what may ultimately, when matured by my own observation, and the experience perhaps of others, prove of some avail. These suggestions are, besides, not only of what I deem the legitimate class, as being founded on analogy instead of hypothesis, and in so much may be reckoned as good illustrations of the several points, as the established practices from which they spring; but they all admit, with one or two exceptions, of

explanation upon intelligible physical principles. I trust, however, notwithstanding these digressions, that the main purpose of this essay, though a mere sketch, has been accomplished; namely, to shew, first, that therapeutics, the most important branch of the science of medicine, still continues, in spite of the great progress made in physiology and the other auxiliary sciences, in a deplorably low state; secondly, that as it is not so likely to be speedily removed from this state by the further cultivation of these, and the theories built upon them, as by observation of the effects of remedies, &c. on disease, and the discovery of analogies existing both amongst diseases and remedies, the investigations of zealous inquirers should not be so much confined to the auxiliary sciences, as at present; and lastly, that as the reports of medical observations have hitherto been of little avail, from the situation of the reporters, or certain influences affecting them, some alteration in this respect is necessary in order to insure the reports possessing that degree of impartiality and correctness which is essential to their utility.

INFLAMMATION OF THE LIVER.

To the Editor of the Medical Gazette.

SIR,

SHOULD the following case of inflammation of the convex surface of the liver, attended by a distinct physical sign, be deemed worthy a place in your valuable journal, its insertion would greatly oblige,

Your obedient servant,
JOHN L. PATERSON, M.D.

Paraibo, S.A., Aug. 1, 1844.

In the month of May, a free black, residing on a sugar plantation a couple of leagues out of town, came to consult me for various dyspeptic affections, from which his health had been suffering more or less during the antecedent six months. He was diagnosed to have granular disease of the liver, and was treated in accordance with such opinion; and during the next three weeks he said he felt his health rapidly improving. At the end of this time, however, he was obliged to make a journey inland of some 200 miles; and in the course of it was much ex-

* Fortunately for those whose motive in seeking such offices is to possess an extended opportunity of observation, the appointments to dispensaries, from the circumstance of their not possessing so much éclat with the public as hospitals, are more easily obtained, and often without the necessity of stooping so low as may be requisite for the acquisition of the appointments in hospitals. Yet, as sources of information to the physician, dispensaries have much the advantage over hospitals, not only as regards the number of cases seen, but in all that regards acute disease. Dr. Alison, who has had much experience as a physician, both to a dispensary and an hospital, states that "it has often happened to him to meet with more opportunities of observing and pointing out to pupils the power of blood-letting over inflammatory disease in a single forenoon of visitation of dispensary patients, than in a three months' course of clinical instruction in an hospital." (*Library of Medicine*, Vol. i. p. 100.)

posed to the conjoined influences of sun and rain. He felt immediately a renewal of his old complaints, and on his return home, felt himself worse than at any former period. Three days after his return, the following symptom, and for which alone the case is remarkable, made its appearance, and so much alarmed him, that he immediately came to town again to consult me. On placing the hand over the epigastric and the anterior part of the right hypochondriac regions, there was communicated to it a rubbing sensation, similar to that felt over the heart in certain cases of pericarditis, but in the present case much rougher and more distinct. On applying the stethoscope over the same parts, that same creaking-of-new-leather sound was heard as in pericarditis, but much more prolonged, louder, and coarser. Any opinion that might on the instant have suggested itself of the dependence of these symptoms on disease of the heart or the arterial system, a moment's examination was sufficient to dispel, showing them utterly unconnected with these, and dependent on, and synchronous with, the act of respiration; for on the patient's holding his breath they immediately disappeared.

The diagnosis made was, that there existed inflammation of the convex surface of the liver and its peritoneal investment, accompanied by an exudation of soft coagulable lymph, and that the symptoms above referred to arose from the motion of the diaphragm over such surface. This opinion seemed borne out by the following considerations:—1st. As already mentioned, on the patient's holding his breath, the symptoms were no longer discoverable. 2dly. They were much more distinct in the erect or sitting posture than in the recumbent; in which last, from the weight of the liver causing it to be more closely applied to the surface of the diaphragm, the motion and play of this muscle over it would be much diminished. And 3dly, the character of the sounds themselves; on inspiration we had a succession of smaller creaking sounds, from the gradual and continuous motion of the diaphragm over the surface of the liver; whereas, on expiration, we had one, or at most two, loud irregular tearing sounds, as if from the sudden lifting of any body out of a viscid gluey substance.

The left lobe of the liver was enlarged and irregular. In ten days the patient again returned, when the rubbing sensation and the sounds were alike almost imperceptible; but the irregularities on the enlarged left lobe existed the same.

I have thought it unnecessary to burden the case with a detail of the other symptoms, or the treatment.

Practising, as I do, in a district in which inflammation of the liver is an occurrence of more than ordinary frequency, I have had an opportunity, since making the above details, of observing the same symptoms, though in a much less marked degree, in another patient affected with acute hepatitis; and I can yet remember of having, in former stethoscopic examinations, been struck with various anomalous sounds in the lower part of the chest, for which I was at the time unable to account, but which I have since thought may be referred to the same cause.

DESCRIPTION OF A MODIFICATION OF THE SPHERICAL-HEADED CUTTER, FOR THE EXCISION OF CARIES.

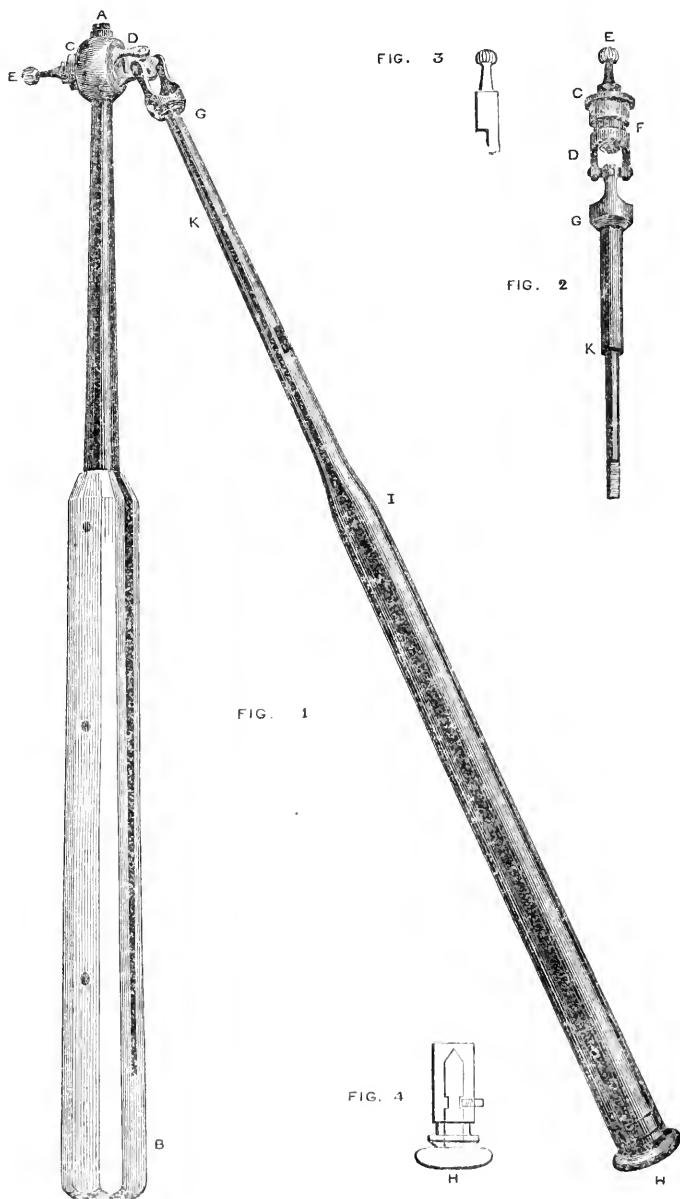
By SAMUEL MACLEAN, Esq. M.R.C.S.L.

THE spherical-headed cutter, for the removal of caries from cavities in the teeth, which cannot be reached by other means, is now very generally used. Although, however, its utility is greatly increased, by the addition of a guide, which enables the operator to steady the pressure and regulate the direction, it is still very far from being a perfect instrument, as caries frequently occurs in situations which it either cannot reach at all, or where it cannot be effectively applied. We have, accordingly, much pleasure in laying before our readers the following description of a most ingenious and elegant modification of this instrument, by Mr. Maclean, which removes all the difficulties attending its use in its present form:—

The accompanying plate, which represents the instrument in its full size, gives a very clear idea of its construction. It consists of a guide formed of a piece of steel, fitted at one end into an ivory handle, and at the other hav-

ing a truly turned collar, in which the mandril (C D) moves freely in a circular direction, being prevented from falling out by a groove in its circumference (F, fig. 2), which engages with a steady-ing pin (at A, fig. 1). This mandril is

represented out of the collar, in fig. 2. The cutters (E) are put in at one end of the mandril, and secured as drills are secured in a drill-stock; and to the other end (D) of the mandril, is attached the driving-handle (G H), by



means of a very simple form of Hook's universal joint, which enables motion to be given to the mandril and contained cutter, when the directions of the cutter and driving-handle form a very acute angle. The driving-handle, in Mr. Maclean's instrument, consists of two parts (α η and κ η in figs. 1 and 2), is of steel, and hollow from ι to η , for the purpose of combining lightness and strength, and also to serve as a convenient case for cutters. At the end it contains a small cylinder, represented detached in fig. 4, the bottom of which serves as a bearing for the axis of the swivel-head (η), which terminates the handle. It is obvious that the part κ η may be used as a handle for the ordinary straight cutter.

It is unnecessary to point out to the professional reader the advantages resulting from this construction. The superior steadiness given by the rotation of cutter and mandril in the collar, and the power of communicating a rotatory movement to the cutter, when the driving-handle is almost parallel to the guide, render the instrument perfect in a mechanical point of view*.

THE FAT OF ANIMALS NOT AN ELEMENT OF RESPIRATION.

By GEO. KEMP, M.D. Cantab.

Fellow of the Cambridge Philosophical Society.

(For the Medical Gazette.)

In a paper "On the Theory of Respiration," which was published in a recent number of this journal, I made no allusion to an ingenious theory of Professor Liebig, that whilst certain parts of the nourishment of animals are capable of being converted into blood, other parts are conveyed to the lungs, for the purpose of being converted into carbonic acid, and thus materially assist the production of animal heat: the former he has denominated plastic elements; the latter, elements of respiration†.

As this view was supported by some most remarkable analogies (which more recent researches, however, prove to be mere accidental coincidences), it speedily gained ground, was adopted

by the highest authorities in France*, and is now taught in many† of our schools as an established truth. Under such circumstances, I was unwilling to enter upon the subject at the conclusion of a lengthy paper, wishing to submit a succinct and decisive proof, but, at the same time, one independent of any peculiar views which I may have adopted, that the doctrine is untenable, and contrary to facts which are universally allowed to be amongst the most incontrovertible in physiology.

The most important bodies arranged by Professor Liebig as elements of respiration, are fat, starch, gum, cane, grape, and milk sugar. With reference to the latter of these, starch, gum, &c. the formula of the chyle, which I have deduced from the analyses of Marcet and Macaire, distinctly proves, that no bodies expressed by formulæ lying between the limits $C_{12} H_8 O_8$ and $C_{12} H_{14} O_{14}$, enter the system at all as such, or before undergoing certain changes in their composition, which, in the present state of our knowledge, we can only refer to the agency of the bile‡. It will also be seen that the fat, $C_{12} H_{16} O$, does not, without assimilation, enter the thoracic duct; but I would not by any means rest upon such a proof, when we possess one of a far more satisfactory nature.

The universal result of inquiries into the amount of oxygen consumed in respiration is§, that "the air once respired is diminished in volume;" and although the amount has been differently stated, as varying from 1-122d to 1-10th of the whole, it has never been observed to exceed 1-10th; the mean of all observations being only 1-24th. My deductions, in the paper on respiration, give 1-13th; but it is evident, from the very nature of the case, it must constantly vary. Now by the term "element of respiration," as applied to fat, can only be understood, that the carbon and hydrogen of the fat are converted into carbonic acid and water by the agency of the oxygen

* "The object of my observations was to leave no doubt of the physiological importance of the fat of animal bodies, as regards the process of respiration. In this view M. Dumas and Bous-singault agree with me."—*Ibid.* p. 310.

† Graham's Elements of Chemistry, p. 1017.

‡ This remark applies, of course, to the normal healthy performance of the digestive and assimilative process.

§ Müller's Physiology, p. 378.

* Dublin Journal of Medical Science, Jan. 1845.

† Liebig's Animal Chemistry, page 96.

contained in the atmospheric air inspired. The point, then, to be determined is, how much oxygen is required for this purpose? And how do the results of the hypothesis agree with the facts of observation? The formula, then, $C_{12}H_{10}O$, evidently requires an addition of 33 equivalents of oxygen, to obtain 12 equivalents of carbonic acid and 10 equivalents of water; but, so far as the oxygen is concerned, only that portion re-appears, as appreciable in volume, which has combined with the carbon; the portion which has combined with the hydrogen is practically lost. What relation, then, does this last portion bear to the whole amount inspired? Of the 33 equivalents consumed, 24 only, as seen above, combine with the carbon, leaving a loss of 9 equivalents of oxygen, which is nearly *three times the maximum* ever observed. The fat, therefore, cannot be considered as taking any important share in respiration.

In a former paper I have shewn, in a different manner, that the bile of animals is unsuitable for the purpose alluded to; but the subject is capable of numerical proof. Thus $C_{48}H_{42}NO_{13}$, in its ultimate disintegration, would first lose 3 equivalents of hydrogen, and all its nitrogen, to form ammonia; and then require $(48 \times 2 + 39)$, or 135 equivalents of oxygen, to oxidize its carbon and hydrogen; but 13 equivalents of oxygen are contained in the substance itself, which reduces the extraneous oxygen to 122 equivalents, of which only 96 combine with the carbon, and consequently 26 disappear as water; but 26 : 122 as 1 : 4.69; and thus the quantity of oxygen disappearing is more than *twice the maximum* loss ever observed.

It is not necessary to take up room with shewing, that even a small portion of either fat or the bile would involve conclusions more or less opposed to accurate observations; for the case put by Professor Liebig, and constantly repeated, is, that these bodies take a very *appreciable* share in respiration, or, as he expresses himself on the bile, are "the most important substances employed in the respiration." (Animal Chemistry, p. 158.)

In considering the respiratory function as consisting essentially in the act of eliminating effete matters, I thought

to have satisfactorily established the mutual compensative actions of the lungs and kidneys. It also appeared to be fairly proved, that the loss of oxygen inspired is referable to the quantity of hydrogen oxidized; but I was not at that time aware of the remarkable confirmation afforded to those views by the agricultural researches of Boussingault.

This kind of evidence will readily be admitted as extremely valuable, those researches having been undertaken with a totally different object. I must, however, reserve the subject for another occasion, as its importance requires more than the brief sketch to which I should necessarily confine myself in this paper.

A superficial view of the foregoing paper would lead to the opinion, that the point is only proved in one particular case, as omnivorous animals alone have been alluded to. With reference to carnivorous animals, the point is at once decided, as, under normal circumstances, they produce little or no fat; and the very large quantity of urea which they secrete amply accounts for the excess of oxygen inspired over that which re-appears in the form of carbonic acid. As it regards graminivorous animals, the researches of Boussingault, which are alluded to above, prove that the loss of oxygen in the horse amounts only to 1-31st part of the whole inspired: in the stall-fed milch cow, to 1-34th; but, as seen above, on the hypothesis that the fat is an element of respiration, the loss of oxygen should amount to one-third, or about ten times the maximum observed; and these cases of graminivorous animals are the ones specially adduced by Professor Liebig as proofs of his theory. The intimate connection of the amount of oxygen lost, and the form in which the azotised portion of effete matters is eliminated by the kidneys, is also very evident. The carnivorous animal, secreting a large amount of urea, sustains a loss of oxygen in respiration of at least one-fifth of the volume inspired: an omnivorous animal, secreting urea and uric acid (the urea being ten times less than in carnivorous animals), a loss of one-tenth; the horse, secreting benzoic acid and ammonia, 1-31th; and the cow, secret-

ing a body allied to hippuric acid, with excess of oxygen, only 1-34th. There is hardly a point in physiology, depending on this kind of evidence, that admits of such an accumulation of proof.

Douglas, Jan. 11, 1845.

NAPHTHA IN PHTHISIS.

To the Editor of the Medical Gazette.

SIR,

I HAVE watched with much interest the treatment of many persons labouring under phthisis pulmonalis by means of naphtha, but lament to state, that they have all gone "to that undiscovered country from whose bourn no traveller returns." Now I am induced to think that the above fact may be rationally accounted for, inasmuch as Dr. Hocken makes the following statement in the last number of your excellent journal:—"Till recently I feel convinced that scarcely any one has tried the *genuine medicinal naphtha*." The doctor has pointed out a place where the real article can be procured, and by so doing has conferred an inestimable boon on suffering humanity, provided it shall prove as efficacious in other hands as in his. He mentions in the same paper, that the plan of evacuating the contents of the chest, as a cure for consumption, was first recommended by Dr. Barry, of Dublin. I imagine that Dr. Last, about the year 1769, must have caught his ideas respecting a somewhat analogous treatment of dropsy from the same quarter. He observes, "I have been at a great deal of pains and trouble, and made many experiments, in order to find a radical cure for this disease, that should be at once safe, cheap, and easy. My first invention was a pump; by means of which, fixed in the belly of the patient, I meant to pump out the dropsical humour as you would water out of the hold of a ship. Threescore and eleven people died under the operation." He eventually abandoned this as impracticable, and his next experiment "was called the soaking operation, which was contrived thus: I made the patient swallow a piece of sponge fastened to a string, which, going down his throat into his stomach, I let lie there till I had absorbed or soaked up the watery humours, and then drew it up again, with all its contents; repeat-

ing the operation till I had left the body as dry as an empty decanter." This plan, though not so unsuccessful as the other, was after some trials relinquished.—I remain, sir,

AN OLD PRACTITIONER.

Paddington, Jan. 12, 1845.

THE RELATIONS OF THE PHYSICIAN.

(FROM THE GERMAN OF PROFESSOR HUFELAND.)

To the Editor of the Medical Gazette.

SIR,

IN a late number of your journal is a very sensible letter from your correspondent L., accompanied with a specimen of "*German Ideal Physiology*," from a work by Carus. I fully agree with your correspondent as to the additional interest which is imparted to your journal by the occasional insertion of extracts from the works of Foreign authors, and it will be your duty to select with judgment from the extracts supplied by your contributors, such papers as will tend to the honour and improvement of the profession.

I feel persuaded that the "*Specimen*," (also from the German,) I here enclose, will meet with the universal approbation of all your readers.

It is indeed a specimen of German literature, containing sentiments so sound, and so practical, as to find an echo in every well-constituted mind. It is from the pen of the venerable Hufeland, who, having devoted his energies to the improvement of the Practice and Literature of Medicine, for upwards of half a century, bequeathed to posterity his "*Enchiridion Medicum*," a depositary into which he casts the final results of his long experience.

I am sir, &c.

H*.

To live for others is the Physician's vocation. He must be ever ready to sacrifice his repose, advantages, and comforts; yea, even higher considera-

[* Our correspondent ought to have informed us that what follows is transcribed, with a few verbal alterations and omissions, from the edition in English of Hufeland's *Enchiridion*, published at New York, by C. Bruchhausen and Dr. Alison, a work which we had the pleasure of noticing some short time ago. The matter is good, however; and in consideration of Hufeland's *Enchiridion* not being generally accessible, we present it to our readers.]—ED. GAZ.]

tions, to the end of saving the life and health of his fellow-men. The healing art is therefore something sublime, and really divine; for its duties coincide with the first and most sacred laws of religion and philanthropy; and require resignation, and an elevation of mind, far above worldly desires. To improve his mind, to sacrifice his person for the public good, and to disseminate good around him, as much as lies in his power, is what he aims at. His professional duties, therefore, will always beautifully harmonize with his conviction and principles, and, so to say, flow from them. What he ought to do, he does with pleasure; and the consequence will be, the highest happiness of man, a consonance of external and internal life. Woe to the physician, who makes honour with men, or money, the end of his efforts! He will be a continual contradiction to himself and his duties; he will curse a vocation which does not reward, because he knows not true reward. This simple view embodies the whole *moral*, or *policy*, so called, of the physician. Policy!—an improper word; for nowhere more than in the medical profession do we see it exemplified, that the best and only policy is that which emanates from an honest and sensitive man. The fundamental rule for all the relations of a physician is:

“Regulate all your actions in a manner that the highest end of your vocation, which is saving life, restoring health, and relieving the sufferings of humanity, be attained as far as possible.”

This rule must ever be present in our mind; it will always direct us to the right point, and guide us safely in the most complicated cases.

From this point let us now consider and regulate the duties of a Physician. They are threefold; towards the sick, towards the public, and towards his colleagues.

A. Relation to the Sick.

The Physician, in exercise of his art, must regard only man, and make no difference between rich and poor, high or low.

He who suffers most, or is in the greatest danger, has a privilege above all others, whatever be their station or condition in society. I pity the Physician who appreciates his patients according to rank or fortune; he knows

not the finest reward of a Physician. What is a handful of gold, compared with the tears of gratitude shed by the poor? The rich man, by his compensation, frequently thinks himself entitled to be ungrateful, and to undervalue the services rendered; but how often is the Physician the sole friend left to the poor in distress! Like an angel of consolation, he appears to him, and raises the vanishing hopes by the interest he takes, and by his art he pours new life into his veins.

In medical treatment, the Physician must exercise his *greatest attention*, *accuracy*, and *conscientiousness*. He must not proceed superficially, but with research and knowledge. He must not consider the patient as a means, but always as an end. Seldom, it is true, can the faults of the Physician be brought before, and punished by a tribunal, but the most certain and the most formidable tribunal is waiting for him—Conscience—where no subterfuge, no palliation, can guard him; where nothing will absolve him but a pure and guiltless mind, and the conviction of having done all within his power and knowledge towards saving his patient. Though he may have learned through improved knowledge, subsequently acquired, that he might have done more and better, he may regret his former deficiency, but not feel remorse; for, at that time, he did all he was capable of performing. He must, however, remember that neither levity, his own ease, or any personal consideration, must lead him to neglect his duties, for then the internal Judge will not remain silent. Such cases will, sooner or later, meet with adequate punishment from tormenting reproaches.

But skill and art alone are not sufficient; he must be particularly mindful of his conduct. It is this which recommends him to the public, and creates confidence and admittance; for the generality of people are incompetent of pronouncing on his science; it is, then, natural for them to take their measure of his ability from the measure of his conduct. By force of conduct alone, a Physician of very modest talents can become the favourite of the public; and, without it, the most skilful medical man remains unnoticed and unappreciated. Of his external appearance, also, he must not be regardless; it should comport with the

dignity of his station, and the importance of his duties. The main feature of his conduct should be aptitude to create confidence; friendly, with dignity; decent, without affectation; gay, but not ludicrous; serious, when he ought to give importance to his subject; and his words complaisant and indulgent in all insignificant matters, but firm while executing important measures, and sustaining the pronounced sentence; sympathizing and cordial, and a sound regard for religion, and its consolation; neither taciturn nor loquacious; much less a messenger of news; but, devoting his whole attention to the sick, noticing every circumstance, careful in the examination of the patient; observing even those around him; neither eccentric or vulgar; neither coxcomb, nor pedant; but holding in the middle, even in all things; especially not passionate and angry, but calm and circumspect; for a quiet and sober sense creates confidence. It is a great fault, common to young practitioners, that they strive to create a sensation, whether it be by the newest fashion of dress, or science, or by paradoxes and singularities, or even by charlatanism. A most important point for attaining the public confidence, but rather too much neglected by our young practitioners, is keeping a journal of cases. When the noise of the day has terminated, and the silence of evening invites to reflection, then the Physician may devote a few hours of calm contemplation to his patients; write down the most important points in the history of a malady, the alterations which have occurred, his remarks and ideas on the origin and treatment of the disease, the remedies prescribed, and reconsider the whole maturely. No evening must pass without paying this last duty to his patients, and thereby adding the keystone to his work. Here, in the silence of night, many a thing will appear to him in quite a different light, than during the day; revelations and inspirations will come over him, such as cannot find birth in the distractions of busy day. Only in this period, when internal life awakens, also can this subject enter into internal life; and only now will it receive true interest and reflection. For that alone which affects and fills our mind, which accompanies us always, even unconsciously, is ours; and solely penetrated

by such an object, we may hope to become perfect in it, and to arrive at new discoveries. The great Newton once was asked, how he had come to his extraordinary discoveries: "I always thought of them," was his reply, "simple but certainly, all embracing." The same is true in regard to visiting the sick. When shall we cease to place confidence in the mere presence of the Physician, and to esteem his care by the number of his visits? Alas! the head cannot keep pace with the feet, as Zimmermann has well remarked. Such mere corporeal presence, and looking on, however often repeated, will not promote a cure; and, properly speaking, amounts to nothing more than rendering honours, paying one's respects to the disease, according to its rank. A visit must be made with deliberation, a collected mind, and be of sufficient duration. The Physician must not be present in body only, but in mind; and must direct his whole attention to his patient, and study him. It is only such visits that will answer the purpose sought. They will result in a double advantage to the Physician; firstly, in convincing the patient of the interest which he takes in him, and thereby gaining his confidence; secondly, in creating that reciprocity of feeling, and familiarity, which permits of a deep insight into the nature of the case; in short, to use an expression of the magnetizers, "place the sick person *en rapport* with the Physician," certainly quite in a particular state of mind; one which admits of particularisation, and a deep insight into the "inward man," teaches us to form more correct feelings and ideas, regarding the sufferings of nature, and her wants, from art, and gives thoughts which strike us the more forcibly since they arise directly from the patient. One such visit is worth more than many made in haste. Too many visits in chronic cases, since they render the patient too common to our senses, may blunt the keenness of our perception, and obstruct our vision; as the saying is, "we cannot see the forest for the trees." I have experienced in such cases, that an interruption of the usual visits, for several days, will enable us to gain a new view of the subject, and to bring phenomena to light, which, heretofore, have escaped our observation. It must, however, be

remarked here, on account of young Physicians, who, through delicacy, confine their visits to too small a number, that in general frequent visits are more requisite, since they enable one to arrive at a more perfect knowledge of the disease, and also preserve the confidence of the patient. Too frequent and unnecessary visits have to be avoided, for they give useless anxiety to the patient, and expose the Physician to be suspected of interested motives. The office of the Physician is not confined to curing diseases; it behoves him, as a duty, to prolong life, and relieve suffering, as maladies pronounced incurable. How much, then, at fault are they who grow disgusted, or lazy, and neglect or forsake a patient when there is no prospect of cure? The interest of the artist, it is true, may be annihilated; but humanity must persist and increase. Verily, the unfortunate who labours under torturing pain, distress, and despair, is still more entitled to our commiseration, than he to whom the prospect of recovery lessens all suffering. It is an act of pity, natural to every generous heart, in such cases, to make life tolerable, to raise dying hope, and to bring consolation at least, where there is no salvation. Moreover, we are too short-sighted, to be capable of always deciding, with certainty, that help is not possible. In the course of a disease, favourable internal revolutions may take place, an external influence may operate, and give a new turn, or give to art opportunity for successful interference. Yea, I consider it as one of the most important rules of practice, never to give up hope. Hope generates ideas, elevates the mind to new views and new endeavours, and can render impossibility possible. He who has given up hope has given up reflection, upon which apathy and paralysis of the mind follow; and the sick must invariably die, because he who has been called to his assistance is already dead. Even in the stage of dying, the Physician ought not to forsake the sick; even then he may become a benefactor, and, if he cannot save, may at least relieve departing life.

The *art of writing prescriptions* is very important, and worthy of more attention than is generally bestowed upon it. *It is the last result of the*

whole examination of the Physician, and the only perpetual document of his genius, and which has even legal authority bearing for or against him.

How readily a little fault committed in a prescription, an error in writing, may decide the fate of the patient, and the Physician's reputation! therefore, it should always be done with a mind most concentrated; and it ought to be an invariable rule with every Physician to peruse every prescription after it is written. Whenever it is possible, without detriment to the main end, the practitioner must always prefer the cheaper to the more expensive remedies. It is indeed cruel to neglect this consideration, in the case of indigent persons, and to take away the means of living, in saving their lives. In this respect he can become a real benefactor to his patients, if he regards their financial circumstances not only with benevolence but with delicacy. I will only refer to one means, by which the expenses of cure may be exceedingly diminished without the *appearance of gratuitous* medication; it is, to make an agreement with an apothecary of charitable mind, to this effect, that he will not charge profit on receipts marked with a concerted sign, by which expedient, those who are really poor, but do not wish to seem so—the bashful poor, may be saved considerable expense. In this way we may succour the indigent, without offending the feelings: to do this, is really to benefit.

Dangerous remedies ought never to pass into the hands of the patient; at least, not in such quantities as to endanger life. It is a horrible sight to see phials of an ounce, or half an ounce of opium, in the sick room. If an accident happens in such a case, the fault always lies with the Physician. No honest practitioner will sell, nor even allow to patients nostrums; for how can he judge of things which he does not know himself?

B. *Relation to the Public.*

To no one is *public opinion* so important as to the Physician. He is the man of the people, in the true sense; the voice of the people decides what shall be his true station. He must, therefore, be most anxious to win reputation, and not unmindful of the means proper for that purpose. It is in vain

to boast of being above public opinion, and not to care for it. The pride of a wise man is, to accomplish his end in the most correct manner. The principal end of a Physician is curing; the more opportunity he can find for practising it, the more completely will he attain that end, and become a benefactor to mankind. Now that depends mainly on the good opinion of the community, and consequently it devolves upon the Physician, as a duty, to make efforts for acquiring and establishing himself in it.

Extraordinary talents, and striking success, it is true, can, so to say, force public opinion, and raise a Physician, even in spite of general dislike. But these are rare exceptions. The common course is this—the young practitioner has gradually to raise a public sentiment in his favour, by which the public may be encouraged to commit to him the highest earthly good—life and health.

The principal means for attaining that end are (besides careful and conscientious attendance on his patient), unshaken probity, regularity of habits, temperance, prudent conduct, modesty, discretion in all his utterances and judgments, precaution in the selection of his company, attention not alone to essentials, but also to appearances. The Physician must never forget he is more observed than other men. He belongs to the community, and every one arrogates to himself the right to judge him. He is of no party; he belongs to all. *Popularity* is his element, and freedom of mind, and of all political relations, his noblest prerogative. He must therefore carefully avoid joining a party. On the contrary, he may congratulate himself that his vocation permits, even obliges him, to take no notice of parties, and be only mere man.

Wit, and a satirical disposition, are dangerous gifts to a practitioner. In no man are they so prejudicial and incompatible with the nature of his vocation, as in the person to whom one has to expose himself in all his nakedness, and has to disclose infirmities and secrets which no body else is destined to learn.

How many have contracted irreconcilable enemies by a single pun! a real injury is more readily pardoned

than mockery. Secresy is one of the first and indispensable qualities of a Physician; for, by his vocation, he learns the most important secrets, and takes the place of a confessor; the happiness not only of single men, but of whole families, lies at his discretion; and it would be an act of baseness to betray confidence, or abuse it intentionally. He is to avoid being, or even appearing, indiscreet; therefore he must speak as little as possible of other patients; answer laconically, and indefinitely, questions asked about others; and, least of all, go into particulars and narratives of domestic life: above all, a practitioner should not be reputed a gamester, a tippler, or a libertine, for these habits are in direct contradiction with his profession, and infallibly will take from him the confidence of the public. He must not appear too desirous of gain; it debases the Physician and his art, deters the poor from applying to him, and takes away that which is worth more than all riches—good repute.

ANALYSES AND NOTICES OF BOOKS.

“L'auteur se tue à allonger ce que le lecteur se tue à abrégér.”—D'ALEMBERT.

Outlines of Military Surgery. By Sir GEORGE BALLINGALL, M.D. F.R.S.E. Regius Professor of Military Surgery in the University of Edinburgh, &c. &c.

INDEPENDENTLY of the national importance of this branch of the profession, the position the author holds in the University of Edinburgh, and the circumstance of a third edition being called for, entitle these *Outlines* to due consideration.

Military surgery includes much more than the mere treatment of surgical diseases, which, indeed, forms but a small part of the duty of an army medical officer. It comprises every thing relating to the prevention as well as the cure of disease—in a word, the extensive subject of Military Hygiène. The topics to be discussed under this head are, “Recruiting, bounty, pay, pensions, and rewards; barracks, transports, clothing, personal cleanliness; duties and exercise of soldiers;

schools and regimental libraries; military discipline and punishments; habits of soldiers, comprehending virtues and vices; the constitution of the medical department, and the duties of the medical staff, both general and regimental; military hospitals; moral treatment of the sick; the compilation of numerical returns of the sick, and the plan of drawing up reports both special and general; proceedings of boards, sick certificates, &c., together with the general principles of military statistics and medical topography; and lastly, instructions to young medical officers respecting their general conduct, especially in regard to their superiors, their equals, inferiors, and patients*." Taking this as a tolerably correct enumeration of the subjects which should be discussed in a work on Military Surgery, we must come to the conclusion that our author has fallen short of the object at which he aimed. Many of the preceding topics are not mentioned at all, and others so casually, as to convey no practical information to students ignorant of all that relates to a military life. Such a work should contain a body of instructions, addressed to young men studying for the department and to junior officers, relative to their duties in the army, and should "embrace, in a general way, all that body of information which every medical officer who has been long in the service acquires in a greater or less degree, but frequently not until he has committed blunders that might have been obviated had he been earlier or better instructed."

The surgical part of the work under review is in general good; but the portion which treats of these military and hygienic topics, we regret to say, is very defective; less than one-fifth of the volume is devoted to them, which is certainly too little, considering their extent and importance. At page 60 of the Outlines it is stated, on the authority of Sir D. Stewart, "that the 92d regiment lost more officers and men in four months from the *climate* of Jamaica, than by the hand of the enemy in an active war of twenty-two years, in the progress of which it was twenty-six times in battle."

The professor seems to have met with similar objections from other

quarters, for he says, "an opinion has been expressed that more of the work should be occupied with the medical, and less with the surgical department of the course." With the first part of this opinion we do not quite coincide, but we would wish to see much more devoted to the topics mentioned above. The diseases of tropical climates form part of every course of practice of medicine in the present day, and the treatment of gun-shot wounds, &c. is discussed by every lecturer on surgery, while the numerous works on practical surgery, of acknowledged merit, at moderate prices, and of bulk adapted for a military man's library, render this portion of the Outlines much less necessary than when the first edition was brought out. But as a reason for this preference shewn to surgery, he says, "I find that this is the department of the course which proves most interesting to that important part of my audience, consisting of gentlemen returning from foreign service, to refresh their memories, or to renovate their knowledge at the schools of medicine." Now we are far from underrating the importance of officers thus brushing off the rust from their memories, or making themselves acquainted with the improvements that have taken place during their absence; but we would suggest that they might do so quite as well in the lecture-rooms of the professors of practice of medicine and surgery; while it is only from the professor of military surgery that the student can expect to acquire information on the subject of his *special* duties as an army medical officer. We are sure none can look back to the commencement of their career in the army without feeling how much a knowledge of these would have contributed to their comfort and usefulness. While we give Sir George Ballingall every credit for the kindly feeling towards old officers by which he is actuated, in thus devoting so much of his time to them, we cannot but think he would effect a greater and more permanent good by confining his attention more to the rearing of efficient recruits for the department.

While we thus dissent from our author's plan of treating his subject, we do not undervalue the surgical portion of the work. Great pains seem to have been taken to bring up the information on the various subjects to the latest date.

* Edin. Med. and Surg. Journal, vol. xliv.

In reviewing a third edition, we cannot of course be expected to go much into detail; but we would notice an article on the "proportion of sick in armies," which is, we believe, a new feature in the work. This is a point of great importance to be able to estimate, that a General may know, out of a given number, how many are likely to take the field, and that he may be provided with an adequate medical staff; and it is essential, to enable medical officers to make the necessary hospital arrangements, and lay in a sufficient supply of medicines and stores. Our author has quoted the opinions of several distinguished writers on this subject, and has given the numbers admitted into hospital, and who died, as stated by Sir John Pringle to have occurred in Germany, in Flanders, and in this country, and by Sir James McGrigor in the peninsular army; but as the strength of the different armies is not given, these figures are of comparatively little value. Although it is of consequence to be able to estimate the number likely to be admitted into hospital under given circumstances, it is much more so to know the proportion constantly non-effective from sickness; and on this point we think our author might have advantageously bestowed a little more space and labour. Vaidy, in his *Hygiène Militaire*, estimates the probable proportion in a healthy garrison at 5 per cent., or in a campaign at not less than 10 per cent., independent of any rencontre with the enemy; but it is not stated on what data this calculation is founded. Sir J. Pringle states, that at the end of the campaign in Germany, the sick in hospital were to the men in health as 3 to 13, or 23 per cent. It is remarkable that this is, to a fraction, the same as the proportion ascertained by Mr. Edmonds to have been constantly sick in the peninsular army, averaging 64,227 strong, between Dec. 1810 and May 1813. This is all the precise information contained in the *Outlines* on this point. The following (which for the sake of space we have arranged in a tabular form), though a mere contribution to the statistics of this important subject, will serve to show that our author might have rendered the article in question more complete. (See p. 550.)

We think Sir George might have

greatly improved his *Outlines*, and particularly the section on the diseases of troops on foreign stations, by drawing more liberally from the valuable statistical reports of the navy and army*, care being taken to condense the information as much as possible. The value of a numerical over a loose or vague statement is indeed very great, and it has the advantage of occupying little space (especially when given in a tabular form), and bringing the principal facts before the eye at once.

Having recently inserted in this journal two articles on the physical and moral effects of military punishments, we looked to our author's remarks on that subject with some curiosity, to see whether he had endeavoured to supply to the young medical officer the want of specific official instructions on this responsible duty. We regret to say that he has not; the only advice given is to abstain from "any idle or pertinacious display of his own consequence in a case where he may fancy his authority paramount to that of the commanding officer." Nothing is said of the necessity for a careful examination of the prisoner prior to signing the certificate of his fitness to undergo punishment, which is laid before the court; nor of the propriety of a re-examination before the flogging, lest disease should in the meantime have been lighted up. We find no mention of those symptoms which would lead us to place the man under observation for a few days before sanctioning the infliction, such as quick pulse, furred tongue, burning skin, &c.; nor of the schemes adopted by some men to get "taken down," and the means of detecting and frustrating such attempts. The last, it should be remembered, must be the work of a few seconds; if the man is really unable to take any more of his punishment, every minute he is kept tied up may be productive of serious injury, while, if taken down without sufficient cause,

* By the way, our author talks of the *Military Statistical Reports* as the joint labour of Colonel Tulloch and Deputy Inspector-General Marshall. By the Queen's Regulations for the Army, Deputy Inspectors and Lieutenant-Colonels rank with each other according to the date of their respective commissions. On what principle, then, does he give to a Lieutenant-Colonel of 31st May, 1844 (we love to be precise), precedence of a Deputy Inspector of 22d July, 1830? thus reversing her Majesty's orders.

		Periods of Observation.		Average Annual strength.	Average Number constantly Sick in 1000 Soldiers.
		Years.	From—To.		
Temperate Climates.	Ireland	32	1797—1828	36,291	51 (1)
	Scotland	7	1816—1822	2975	36 (1)
	{ Cavalry	2	1823—1824	3933	40 (2)
	{ Guards	"	" "	3870	42 (2)
	{ Infantry	"	" "	5271	49 (2)
	United Kingdom	7	1830—1836	6166	40 (3)
	Nova Scotia & New Brunswick	20	1817—1836	2206	34 (3)*
	Canada	"	" "	3053	44 (3)
	Bermudas	"	" "	586	53 (3)
	Gibraltar	19	1818—1836	3172	41 (3)
	Malta	20	1817—1836	2041	45 (3)
	" Native Corps	11	1826—1836	515	25 (3)†
	Ionian Islands	20	1817—1836	3515	47 (3)
	Prussian Army	10	Not stated.	Not stated.	44 (3)‡
Tropical Climates.	French Army in Algeria	2	1837—1838	45,428	60 (3)
	St. Helena	9	{ 1816—1822 1836—1837 }	997	61 (3)
	Mauritius	19	1818—1836	1606	68 (3)
	Ceylon	20	1817—1836	2149	67 (3)
	Madras	22	1793—1814	8375	105 (4)
	Bengal and Agra	1	1833	11,999	129 (2)
	" Native Troops	"	" "	90,075	47 (2)
	Wd. and Ld. Comd.	20	1817—1836	4333	87 (3)
	" Black Troops	"	" "	— \$	42 (3)
	Jamaica	18	1819—1836	2578	63 (3)

(1) Marshall, Ed. Med. and Surg. Journal, Vol. 40.

(2) Thomson's Observations on the Influence of Climates: a Prize Thesis.

(3) Statistical Reports on the Sickness of the Troops, &c.

(4) Report on Vital Statistics, by a Committee of the Statistical Society of London.—See Vol. 3 of the Society's Journal.

(5) Recueil de Memoires de Médecine Militaire, Vol. 50.

discipline suffers, and the surgeon is looked on by the men themselves as a soft fellow, under whom they may with impunity try any tricks of malingering they think fit. We must again express our regret that the junior medical officers are still left without a sufficient guide in regard to their duty on a punishment parade.

In conclusion, we must repeat our conviction, that while these Outlines are no doubt useful to the older officers, as a book of reference on points of surgery, they are not calculated to instruct students and junior officers, as yet unacquainted with the habits and condition of the men over whom they are expected to exercise a vigilant superintendence, in the important duties which devolve upon them. We would strongly advise our author to bring out

a work on Military Hygiene, for the use of such; and when another edition of his Outlines is required, he can adapt them more exclusively for the seniors, to whom at present they seem chiefly useful. We are aware that to do this will involve a large amount of time and labour; but we have no doubt that, if Sir George undertakes it, he will execute his task in such a manner as to reflect credit on himself and the University of Edinburgh.

Statistics of Recruiting in the Districts of Great Britain and Ireland, during the Year ending 31st March, 1844.
Compiled from the Annual Returns, by order of the Director-General.
Lithographed.

THE name of the compiler of this brochure is not given; but we presume the materials have been arranged under the superintendence of Dr. Gordon, professional secretary to the Director-

* Considerably understated—vide Report.

† This low ratio is chiefly attributable to a large portion of the Malta fencibles being married men.

‡ See Report on Troops in the United Kingdom.

\$ Strength not stated exclusive of *frontiers*.

General. It is much to be regretted that the compiler was not instructed to include the statistics of recruiting for a period of twenty or twenty-five years, instead of limiting his labours to one year. Besides, by confining his observations to the recruits inspected at the head-quarters of districts, and thereby excluding those who enlist at the head-quarters of regiments and depôts, no general deductions can be drawn in regard to the absolute number raised during a specific period of time, or in each of the several divisions of the United Kingdom. In the reports which may in future emanate from the medical department, we hope to see these omissions supplied, there being, it is presumed, no want of elementary materials.

The number of recruits medically inspected during the year ending 21st March, 1844, was 17,540, and the number rejected 6,026, or 34·6 per cent. An error appears to have crept into Table 3d, "shewing the native countries of recruits inspected," which table comprehends only 17,073 recruits, instead of 17,540. We regret the occurrence of this mistake the more, as we intended to make a few observations upon the relative disposition of the inhabitants of different divisions of the kingdom to enlist; but we are precluded from touching upon that subject at present. With reference, however, to this topic, we may simply state, that it appears by a Parliamentary return, that on the 1st January, 1840, there were the following number of English, Scotch, and Irish non-commissioned officers and privates in the British army:—

English, 47,394, or 34 per 10,000 of the population, according to the census of 1831.

Scotch, 13,388, or 51 per ditto.

Irish . 39,193, or 51 per ditto.

The relative proportion of recruits raised, &c. in the different districts, is appended to this notice.

Thus it appears that the range of the ratio of rejections in the above ten depôts or districts, is from 17·9 in the Cork district, to 48 per cent. in Edinburgh. The compiler states, that in the Leeds district the ratio of rejections is the highest; but this is a mistake, the Edinburgh district being 4·4 per cent. higher than Leeds. We have

remodelled this table of the relative proportions of recruits inspected, &c., as the form in which it has been drawn up is not well adapted for comparing the results of one district with another.

Districts.	Number inspected.	Rejected.	Centesimal Ratio rejected.
London . .	5523	1858	33·6
Liverpool .	1815	715	39·3
Dublin . .	1791	658	36·6
Coventry . .	1402	394	28·1
Glasgow . .	1590	624	39·9
Bristol . .	1477	479	32·5
Cork . . .	1170	209	17·9
Leeds . . .	1089	491	43·6
Edinburgh .	896	431	48·
Newry . . .	784	167	21·3

MEDICAL GAZETTE.

Friday, January 24, 1845.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

RUMOURED CHANGES RELATIVE TO THE COLLEGE OF SURGEONS.

RUMOUR states that material changes are about to be introduced by the majority of the Council of the College of Surgeons, and that these changes are to be sanctioned by a supplementary charter. It is said to be in contemplation that all members now and for the future of ten or fifteen years' standing shall be created fellows; that gentlemen practising midwifery will be eligible to the Council; that the Court of Examiners will be partially composed of surgeon-aecoucheurs, and examinations in midwifery will form, for the future, an integral part of the surgical candidate's examination; that the fellows will take seniority in the order of their standing as members of the College, and be allowed to propose,

without reference to any list of precedence, any fit member as a candidate to fill up whatsoever vacancies occur*. We cannot tell upon what authority the above statement is based, or whence it originated. We would not for a moment suppose that any member of Council could have been wilfully guilty of a breach of confidence, or even permitted the slightest whisper to transpire of the private proceedings of the Board.

We need scarcely say we should hail with unfeigned satisfaction any proposed extension of the franchise, as being one of the most healing measures that could be adopted for allaying the discontent and heart-burnings now uttered in every quarter of the land. There can be no doubt that the Charter lately granted has been held to be a means of inflicting great injustice upon the members of that College; and this they feel in the most poignant manner. We have, therefore, no hesitation in affirming that, if the Council come generously forward and invite to the bond of *fellowship* every respectable member of a certain standing, irrespective of all other considerations, it will quench all prevailing animosities; it will tend to elevate the character of the profession, and effectually further the cause of reform. We have all along regarded the division or separation into two grades or classes as a very doubtful step. There can be only one degree in surgery, as in medicine. The endeavour to create two denominations of surgeons, although originating in most praiseworthy motives, appears like an anomaly in the annals of science.

In the event of such changes taking place as those above alluded to, we would submit to the Council the propriety of amplifying the course of examination. We are of opinion that

medicine, chemistry, *materia medica*, as well as midwifery, as suggested in the *Times* of Tuesday last, might be most judiciously appended. We should recommend farther, that the examination, so far as anatomy and chemistry are concerned, be made rigorously demonstrative, on the sound principle now introduced with respect to the examination for the fellowship. Let the candidate dissect, in the presence of the Court of Examiners, some region of the body; let him point out the relations and uses of the several parts the scalpel brings to light; let him apply the processes of chemical research to testing an animal fluid, or to the detection of poison. Thus the positive knowledge of the candidate will be accurately determined—thus an end will be put to the disgraceful system of *grinding*, which now prevails to such an unprecedented degree. The idle and dissolute will no longer be permitted to sully the ranks of an honourable profession; for none other than individuals fully qualified will be permitted to assume the title of surgeon. As a matter of course, the Society of Apothecaries would cease to exist; their occupation would be done. The novel project of incorporation of general practitioners would likewise speedily fall to the ground, and be forgotten. England would recognize as practitioners such, and such alone, as were members of a College of Physicians, or of a College of Surgeons.

The subject of midwifery has been heretofore a great stumbling-block to the corporate bodies of this metropolis. The practice of it is substantially in the hands of the members of the College of Surgeons; and, although there was a bye-law in the late Charter requiring a certificate of attendance on lectures in midwifery, no examinations were ever instituted touching the student's

* *Medical Times*, Jan. 18, 1845.

obstetrical knowledge; a department preposterously termed "ancillary to nature," by way of invidious distinction—as if medicine taken as a whole were ought else than ancillary to nature. It was the opinion of counsel that the apothecaries have no power by the Act of Parliament to examine in the art of midwifery, which is no respect comprised within the Act. We, therefore, cannot imagine that it would be in any wise derogatory for the Court of Examiners to bring this neglected subject within their pale, and submit to the candidate a question or two upon the functions of the uterus, just as they would upon the functions of the bladder. The two viscera are generally in juxtaposition. Assuredly, the management of the function of the uterus is as fairly a part of surgery as the management of the functions of the bladder, or of any other organ in the body. The great obstacle hitherto has been in viewing midwifery as a branch apart. It is no branch apart; it implies nothing more than the superintendence of a function of the human frame. You might as well, as Sir Charles M. Clark told the Committee of the Commons, "have a separate branch for lithotomy, which is the removal of a dead stone from the living body."

MOVEMENT IN THE PROFESSION.

THE Faculty of Physicians and Surgeons of Glasgow, a chartered body, that has exercised the privilege of examining and licensing general practitioners in medicine and surgery for upwards of two hundred years, held a *pro re nata* meeting within their hall, on the 9th ult. They cordially approve of the Bill as far as it provides a uniform standard of medical education and qualification. They agree to surrender all peculiar rights and privileges at present possessed by them, which may anywise interfere with the general interests of the profession, but claim the

same privileges proposed to be conferred upon other Royal Colleges. In giving their approbation to the formation of a Council of Health, they demand to have a representative from their body in the said Council. They acknowledge the favourable position they occupy in the Bill under the title of the Royal College of Physicians and Surgeons of Glasgow; but complain of the proposal to exclude them from the right and privilege of examining and granting licenses, as an act of injustice, not only to their Faculty, but to the Medical School of Glasgow, and to the City of Glasgow itself. They further recommend that a clause be introduced imposing a penalty upon any person, not merely for falsely pretending "that he is registered," but for falsely assuming any name or title implying that he is qualified to practise any branch of the healing art. The proposed fees for registration they deem too high. This Faculty are of opinion that proof of previous study ought to be required from the candidate for registration as a licentiate in medicine and surgery, as well as from the physician or surgeon; and that the age ought to bear reference to the period at which the candidate is entitled to be examined for his license.

A meeting of the medical profession of Ulverston and Lonsdale, North of the Sands, was convened on the 15th inst., W. F. D. Dickinson, Esq. in the chair. The circumstance of the legislature taking into consideration the state of the profession, and of the introduction of a bill into Parliament by Sir J. Graham for Medical Reform, was hailed with great satisfaction; but it was contended that great injury would accrue from a repeal of the Apothecaries' Act, unless some penal check and more ample security from empiricism were substituted. It was deemed desirable that a Council of Health be established, provided the interests of the general practitioner are duly represented therein; that annual registration be rendered compulsory; and that chemists and druggists be obliged to undergo an examination before a competent board, as to their proficiency in the knowledge of chemistry and pharmacy.

A petition has been forwarded by the

medical practitioners residing in the county of Hertford, praying for—uniformity of qualification and of fees required by the various examining Colleges throughout the kingdom; annual registration; equal right to practise; exclusion of unregistered persons from all public medical appointments, disqualification of such to give medical evidence, or grant certificates, and prevention, under a penalty for misdemeanour, from using or assuming any name or title implying that the party is a medical or surgical practitioner; protection to general practitioners against the practice of unregistered persons, equivalent to that afforded by the Act of 1815; a superintending Council, in which all classes shall be adequately represented. Lastly, all members of the College of Surgeons, at the time of granting the late charter, to be placed on a like footing, and to enjoy equal rights, titles, and privileges.

The following protest, we are informed, is now circulating in East Kent, and has already been numerously signed:—

“We, the undersigned members of the Royal College of Surgeons in London, residing in the Eastern Division of the County of Kent, desire to record our protest against the proceedings of the Council of the College, in relation to the new charter.

“We protest earnestly against being deprived of that equality of rank to which an equality of examination had entitled us; and we consider the offer of admission to the Fellowship upon examination and payment of fees, when it has been arbitrarily granted to others without either, to be adding insult to injustice.”

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Tuesday, January 14th, 1845.

MR. STANLEY, President, in the Chair.

Case of Aneurism of the Popliteal Artery, cured by Compression of the Femoral Artery. By EDWARD GREATREX, Esq. Surgeon, and W. T. C. ROBINSON, Esq. Assistant-Surgeon of the Coldstream Guards. (Communicated by the President.)

The patient, a private of the Coldstream Guards, 27 years of age, and previously

healthy, on the 2d of May, 1844, complained of pain and swelling behind the right knee. On examination, a large, irregularly-shaped aneurism was found filling up the popliteal space, strongly pulsating, and admitting of being partially emptied by pressure. A delay took place in proceeding to apply compression till the 18th of June, owing to the patient having been seized with acute laryngitis. An Italian tourniquet, with modifications in its construction, was then employed; but a relaxation in the treatment was soon required, from the patient being attacked with modified small-pox. On the 8th of July, the tumor having increased in size, the plan was adopted of screwing the pad down firmly upon the femoral artery, and leaving the patient the key, so that when the pain became intolerable he might relax the pressure by the instrument, and compress the artery higher up by his fingers. On the following day this method was found to have been successful, for the tumor was perfectly solid, and no pulsation or bellows sound was afterwards perceived. The compression was continued for nine days longer. When the instrument was removed, the femoral artery was distinctly felt to pulsate down to its entrance into the tendinous canal, and two arteries, about as large as crow quills, could be traced over the surface of the now hard and solid tumor. From this date the swelling gradually diminished; the patient began to walk about on the 9th of August, and he was dismissed from the hospital, to undertake light duty, on the 14th of November. He returned to full duty on the 12th December, which he has efficiently discharged to the present time.

Mr. B. Cooper inquired of the author of the paper whether he considered that his patient was safe.

Mr. Greatrex was of that opinion: the man had been on regular duty during the last six months.

Mr. Cooper had tried pressure in two cases of popliteal aneurism, but without the instrument and precautions adopted in the case before the Society. In the first of these cases, the patient, a laborious orange porter, was three years since admitted into Guy's Hospital for aneurism of the right popliteal artery, for which the femoral was tied with success. He suffered also from a small aneurismal tumor in the left popliteal space; and for the cure of this pressure was applied to the femoral artery by means of a compress and bandage, the compression being so regulated as to prevent the circulation through the vessel. The popliteal tumor became smaller, hard, and without pulsation; but in consequence of the healing process of the leg being protracted from

the formation of abscesses, the man was detained for a long period in the hospital, and when discharged was supposed to be entirely well. He returned, however, at the end of fourteen months, with the left popliteal tumor enlarged and pulsating; and it was thought advisable to secure the femoral vessel on that side. Whether the return of the aneurism was owing to absorption of the coagulum, or from the influence of an anastomosing vessel, he could not say, but such was the effect. In another case, in which he had operated on the opposite side a short time before, a man presented himself with aneurism of the popliteal artery; and for this pressure was applied for the space of six months, with the effect of producing an apparently perfect cure. Four months afterwards, however, the disease returned, and the artery on that side was ligatured, and a cure effected. In these two cases there was one point in which they resembled Mr. Greatrex's case, and that was the patency of the artery in communication with the swelling. Looking at this circumstance, so different to what occurred after securing the vessel above, and the return of the disease in his own cases, he viewed the result of Mr. Greatrex's case with some apprehension as to a perfect cure.

Mr. Greatrex said that compression was commenced in his case on the 18th of June, and by the 9th of July no pulsation could be felt in the tumor; the man was as strong on this leg as on the other.

Mr. Stanley had seen Mr. Greatrex's case; the disease certainly appeared to be cured. Points of importance, however, had been raised by Mr. Cooper. The operations by Mr. Liston, Mr. Cusack, and Mr. Houston, although at present successful, did not warrant us in concluding that we might trust to pressure alone in cases of this description. In answer to a question, Mr. Stanley replied that the circulation in the artery, in the case before the Society, was free, as it was also in two or three other cases that he had read.

Mr. Greatrex observed, that the mere freedom of circulation through the artery did not militate against the success of the mode he had employed, inasmuch as blood would in some cases flow to the aneurism even after ligature of the femoral.

Mr. Cooper thought that it would require twelve months from the operation to determine whether a cure was effected in cases treated by pressure.

Mr. Curling said that the mode of applying pressure pursued by Mr. Cooper was very different from that which was employed in the case under discussion. In one case the collateral circulation was unaffected; in the other it was interfered with. It was reasonable to expect a better result from the

one mode than from the other. In the treatment of popliteal aneurism by pressure, it was not necessary to completely obstruct the circulation through the femoral artery, as a mere retardation in the flow of blood would effect the formation of a coagulum in the tumor. We had no evidence at present of the condition of the artery after cure by pressure, but he expected that we should discover a firm coagulum in the sac, and a patent state of the vessel above.

Mr. Greatrex said, that the only peculiarity in the circulation in his case was, that on the affected side it was somewhat weaker than on the other.

Mr. Cooper knew that his mode of applying pressure was inferior to that pursued in the case before the Society. He considered it by no means proved that, in these cases, the mode of cure was different from that which obtained when the vessel was ligatured. The advocates of treatment by pressure considered it would do away with the necessity of all other operations.

Mr. Shaw recollected the case of a man in whom Sir C. Bell tied the femoral artery some years since, for popliteal aneurism. The pulsation of the tumor ceased for a short space of time, on the application of the ligature; but almost immediately returned, and continued for three days. It then ceased completely. Erysipelas attacked the limb, and six days after the operation the man died. An unusual distribution of the artery was found, for immediately below the giving off of the profunda the artery divided into two large branches, which again united into a common vessel immediately below the tendon of the triceps. Notwithstanding only one of these branches had been secured by the ligature, the blood in the tumor had coagulated and become firm, as the preparation of the case still shewed. This case illustrated the possibility of a coagulum being found in the sac of the aneurism, even though the channel of the blood was not completely interfered with.

Mr. Charles Hawkins detailed the case of a man who, some time since, was admitted into St. George's Hospital with a large aneurism at the upper part of the thigh. He would not consent to an operation; and as the tumor kept increasing in size, he eventually took to his bed, and there laid for the space of nine months, at the end of which time the tumor was very much diminished, and had since entirely disappeared. Sir B. Brodie had four or five years ago tied the external iliac, for aneurism in the thigh. The patient remained well for two years, when he again returned, with the tumor larger than ever. He shortly after died of disease of the lung; and it was then found that an unusually distributed

vessel communicated with the tumor, and reproduced the disease.

Mr. B. Cooper mentioned a case of popliteal aneurism, respecting which he had been consulted some years ago. The patient had six months previously been operated on by Mr. Wilson, of Manchester, an able and experienced surgeon. The cicatrix of the incision was still visible. The tumor had returned a few months after the operation. Mr. Cooper, with some difficulty, now tied the artery lower down. The pulsation in the tumor was instantly arrested, but returned in the space of ten minutes as forcibly as ever. As it was evident nothing further could be done by operation, the patient was placed in bed, blood taken from the arm, tartar emetic administered, and cold applied to the limb. On the fourth day pulsation had entirely ceased, and the patient continued well until his death, a short time since, at Milan, at which place he died of aneurism of the heart. In this case, no doubt, some anomalous distribution existed.

Mr. Stanley inquired what was the condition of the artery between the point of ligature and the aneurism, in the cases which Mr. Cooper had examined.

Mr. Cooper replied, that in four cases which he had seen, the vessel was a mere impervious cord.

Mr. Stanley had dissected two cases, one in which he had operated six years previously, the other had been operated on by Mr. Lawrence twelve months before death. In the first case, the femoral artery was found quite free from just below the ligature to the aneurism; and in the second case, it was free from the ligature to the middle of the ham. This, he believed, was generally the condition of the vessel, and was owing to the influence of the collateral circulation. In Mr. Lawrence's case the tumor was found to contain successive layers of solid fibrine.

Mr. Cæsar Hawkins thought as the tumor in Mr. Greatrex's case had decreased in size, and there had been no pulsation in it for a long period, that that gentleman was justified in considering it cured, except inasmuch as aneurism might return after any kind of operation. It was known to surgeons that aneurism did return at a very late period after operations for its cure. He had seen it return after seven years; and Sir A. Cooper related a case in which it was fifteen years before it re-appeared. In his, Mr. Hawkins', case, the man came back with a large popliteal aneurism, the result, doubtless, of some anastomosing vessel. Amputation was resorted to, but the man died a few hours after, and it was found that two large vessels came off from the ligatured vessel, one just below the tendon of the

triceps, the other communicated with the aneurism. Notwithstanding these anomalies, it was seven years before the sac of the aneurism refilled. If aneurism returned after cure by pressure, that means might again be resorted to. It was not necessary, as had been formerly supposed, to employ extreme pressure in these cases. It was now well known that moderate pressure, so as to retard, and not completely arrest, the circulation, was sufficient to produce a coagulum, and effect a cure. A case was at present under treatment by pressure in St. George's Hospital. In Mr. Weiss's instrument, the pad on the side towards the tumor was too flat; it would be more manageable if it were somewhat concave.

Dr. McDonnell had examined a case of aneurism in which Sir C. Bell had operated twenty years before. The artery above was obliterated.

Mr. Shaw recollected examining a case in which a man had died suddenly of aneurism of the heart, shortly after the femoral artery had been tied by Mr. Arnott for popliteal aneurism. A coagulum had formed in the tumor. The artery was pervious from an inch below the ligature to the aneurism.

A Visitor remarked, that the circumstance of death occurring from aneurism in some other part of the body after operation for this disease, seemed to indicate that there was something peculiar in the general arterial system in these cases.

The President said that in one of his cases death was the result of old age, in the other of aneurism of the heart.

On the Periodicity of Neuroses. By ISAAC PIDDUCK, M.D.

The case, related as a singular instance of neuralgic periodicity, was that of a girl, aged 14, in whom the catamenia had not appeared. Six years ago she was thrown out of a swing, and struck her head against a brick: pain in the forehead ensued, which lasted about a fortnight. The right hand then became clenched, and the headache ceased. The hand continued immoveably closed for three weeks, when it opened of its own accord, and the headache returned. The hand remained open, and she had the free use of it for three weeks, during which time she suffered from headache; it then closed, with the same relief as before.

From the time of the accident to August last, a period of six years, these alternations of closing and of opening of the hand, and of headache, have followed each other with perfect regularity.

When the author first saw the patient, the hand was closed, and a forcible attempt to open it gave her great pain in the head. She complained of tenderness along the cervical

vertebræ. One-fifteenth of a grain of strychnia was given three times a day, and mustard poultices to the spine; and, as the perspiration smelt very sour, an antacid diet was directed. Under this plan her health improved, and when the hand opened at the end of the last three weeks of its closure, she ceased to complain of the head. After this there was no return of closure of the hand, nor of headache, and she has continued perfectly well up to this time.

Sir G. Lefevre made some remarks with the view of showing that various affections frequently assumed the periodic character. He related the case of a young man in whom palpitation of the heart recurred every twenty-eight days. Nervous headache was frequently more severe in the morning, going altogether in the evening. It was necessary to attend to the condition of the mind in cases of nervous affections.

ON THE APPLICATION OF MESMERISM. TO SURGICAL OPERATIONS.

To the Editor of the Medical Gazette.

SIR,

In your number of Dec. 27th, you published a letter from a "Hospital-Surgeon," suggesting an experimental trial of the effects of mesmerism in deadening the sense of pain. Allow me to express my most cordial acquiescence in such a plan, and at the same time to suggest a further extension of this dispassionate inquiry into the merits of the case.

As mesmerists are fond of publishing an account of their wonderful sensations, we have by this time a tolerably large collection of *facts* scattered up and down in the newspapers, gazettes, &c. Let some one (excuse me, Mr. Editor) analyze these, and republish them in a tabular form: thus we shall learn what proportion of these wonderful people do such and such wonderful things.

As I am a sceptic, perhaps the *facts*, in my hands, would be as stubbornly opposed to display their true bearings, as are the subjects of mesmeric influence to give any manifestations in the presence of a man who does not believe in the truth of their exhibition before he has seen the show. So, praying to be excused for my own part, I will merely point out a few questions, the solution of which are deep in Democritus' well at present.

First, we find that patients in this state can see with their epigastrium. Now, can they see only with their epigastrium when naked, or may it be clothed? This would

be important to know, before introducing mesmerism into fashionable circles. Then, if it may be covered, what covering is the best? does flannel, or linen, or silk, do best? Is there ever a black spot on the object corresponding to a trowser button; or does the busk of the stays prevent perfect epigastric vision? How comes it that they can see, through a brick wall, any object hung up on the other side? Can different patients see different depths into the brick wall?

I shall tire you, Mr. Editor, with asking all these questions; but here am I, with my mouth open, aghast at the wonders around me! Must I believe them? They are all recorded by persons of most undoubted veracity. All, did I say? Let us have a column in these tables, which I want some one to make, stating the authority for each case, and a graduated scale of the veracity of each as settled by common consent. Let Miss Martineau and her little innocent stand at the head—say 100°. If you ask me why, I will tell you: from my own convictions of her honesty; because she would not tell any thing at the "Séance" till she was sure that all the village could bear her out in her statement. Of course she could have told it before, if she had chosen.

Let this case stand at the top of the list, then, in the order that is thought best; let us have Alexis and his brother, the Misses Okey, and all the rest.

This sight through brick walls troubles me, Mr. Editor, more than I can well tell; but I must ask you to set me right on another point. I do not at all understand this knowledge of past events. Alexis quite repudiated the idea of his mind being merely a reflection of that of his bear leader: he knew what had been done, and was doing elsewhere; so did Mr. Costello's case, who, however, did not scruple to avail himself of this reflection.

Pray let us have a column devoted to knowledge of past events, and mention, at the same time, as much as you can, about how much money the gentleman who asks the questions gets from the mesmerizer for so doing.

I should like to know about foresight; and whether, in any case, the bear leader has mesmerized his victim to know whether the speculation would answer; but I have taken up so much room, that I really am ashamed to ask any more of you; so believe me to remain, your

CONSTANT READER.

London, Jan. 14, 1845.

CONVERSAZIONE AT THE COLLEGE OF PHYSICIANS.

To the Editor of the Medical Gazette.

SIR,

SOME years back, when Sir Henry Halford was President, there were frequent Evening Meetings at the College of Physicians. These evenings brought together not only some of the most distinguished characters of the age, but sometimes Royalty, and frequently many of the nobility, and the heads of the Church and the Law. Besides such advantages, they made those not of the profession take an interest in it: they congregated together from the east to the west, and from the north to the south, all respectable grades of the medical profession, and created a most friendly and good feeling amongst them. The College of Physicians was a centre of attraction, and its meetings gave to those who lived at a great distance from one another, and on that account but seldom met, the opportunity of keeping up an old friendship, or interchanging sentiments both general and professional. So delightful were those evenings, that I hope, through the medium of your valuable journal, you will allow me to suggest a repetition of them. They might be of great utility in the present divided state of the profession, and restore that unanimity of good feeling which ought always to exist in so enlightened a body.—I am, sir,

Your obedient servant,

AMICUS.

January, 1845.

ST. MARYLEBONE INFIRMARY.

To the Editor of the Medical Gazette.

SIR,

YOUR correspondent, "Philatrus," in his letter on the St. Marylebone Infirmary, has made some very excellent remarks, in the justice of which I have no doubt but that all your readers will agree, upon the impropriety of medical men offering their services for gratuitous appointments. But, sir, your correspondent has been guilty of a gross act of injustice in endeavouring to lay the blame of this upon "*young aspirants for doctoring paupers*," under which head he would scarcely, I should think, class Drs. Mayo, Clendinning, and Harrison, or Mr. Stafford, the present officers of the Infirmary; or Drs. Marshall Hall, Hope, Sims, A. T. Thomson, Macreight, &c. who have either actually held, or at least competed for, and thus shown their anxiety to hold, gratuitous office at that Institution. Surely, if gentlemen of their age and position will do this, it is very unjust to

saddle the younger members of the profession with the opprobrium for the existing state of things.—I am, sir,

Your constant reader,

PHILOJUSTITIA.

January 18, 1845.

PURPURA HÆMORRHAGICA.

To the Editor of the Medical Gazette.

SIR,

IN perusing the very interesting case of Purpura Hæmorrhagica, related by Mr. Adams, in the Gazette of last week, I could not help thinking that the treatment there pursued was not the one agreeing with the pathology of the disease. On referring to the case, we see that the patient was bled from the arm, and that mercury in large doses was given: great debility and other formidable symptoms ensuing, stimulants were used; notwithstanding, the patient soon sank.

When we come to consider the nature of the symptoms in this well-marked case, we shall see that they denoted (as purpura in general does) a morbid and vitiated state of the blood; the blood, in fact, in this disease, has lost its vital part, if I may so say. Are those remedies, then, which only tend to impoverish the blood, to be used in this formidable state of things? Mr. Adams has told us that the blood was sizy, but its *coagulum loose*. This fact I think strongly contra-indicates the use of blood-letting and mercury, which especially tends to impoverish the blood and alter its constituent elements. *The large ribcices on the neck* shewed the deterioration of the blood and system altogether. The first case of the kind I ever saw was whilst I was in my apprenticeship; the symptoms were similar to the one related, but not quite so formidable—bleeding was here resorted to by the excellent and well-known practitioner I was with, and the patient sank rapidly, and I recollect well the practitioner's regret at the course he pursued. This case gave me a strong abhorrence of blood-letting, so invaluable a remedy in some diseases, and which I am afraid is cried down by some men who wish to change the treatment of medicine altogether. I believe that the treatment in purpura should be directed to the improving the condition of the blood. Therefore I would lay aside blood-letting and mercury (except particular circumstances indicate their use), and would recommend doses of sulphate of quinine, with the mineral acids from the first, with moderate purging.

At the latter stage of the disease, we should allow a liberal diet and the use of port wine.

I recollect well that Mr. Lawrence, who was called in to the case mentioned by me, used these after blood-letting was employed. In conclusion, I would impress the necessity of recollecting, in our treatment of this disease, that it is strictly one of the *blood*.

I am, sir,

Your obedient servant,

HENRY SMITH.

62, Great Russell Street,
Bloomsbury.

SOCIETY AND THE DOCTORS.

A SURGEON is sent for to attend a sick person—we now simply state a case occurring only the other day: in the discharge of his professional duties he is ready to go,—in the discharge of his duty to himself and family, he inquires who is to pay him; the reply to this reasonable, and, in a man who gets his livelihood by an arduous profession, natural inquiry, is, imprecations and abusive language; the surgeon declines to attend the patient, and the patient unfortunately dies, Society taking no more trouble than to order a coroner's inquest. The inquest is held; the surgeon states the facts above stated; he states, moreover, that he frequently was knocked up to attend paupers—the children of Society; to exercise his humanity, skill, and attention upon them, without getting a farthing; that he has himself knocked up the butcher, to get materials for making beef-tea for the patient, and was refused with butcherlike expressions; that he lived by his profession; that his time was his means of life; that, in this particular case, he was preparing to attend the patient, when he was revolted by the abuse of those who solicited his aid.

Society, represented by the coroner, or his deputy, we forget which, waxed exceedingly indignant. The poor practitioner was informed, with ludicrous gravity, "That if he got no money, he should have found sufficient recompense in the esteem of his fellow-men;" that he should be ready, at all hours of the day and night, to do Society's business, in the way of his profession, for nothing. "Humanity," said the coroner, "is a great thing." The jury, among whom might or might not have been the butcher who refused materials for beef-tea, became humane and benevolent, as it cost them nothing, and "fully concurred in the observations of the coroner."

Now, let us see whether in his conduct towards this poor medical man Society did not on this occasion exhibit himself a most unfeeling, as well as an impudent fellow.

A man determines to invest his time and money in obtaining the diploma of the College of Surgeons. Very well. Does

Society educate him for nothing? Does Society feed, clothe, and lodge him while walking the hospitals, attending lectures, or undergoing the disgusting details of the dissecting-room, for nothing? On the contrary, Society takes a thousand Protean shapes to extract money from the pockets of this very man, whom it victimizes afterwards for not running like a lamp-lighter to do its business gratis.

In the shape of a Professor, Society dives into the pockets of the student for fees for lectures, demonstrations, and hospital attendance; in the shape of a landlady and tradespeople it makes him pay through the nose for every thing he has, and, sometimes, for things he has not had; in the shape of a college it makes him pay for his diploma, before it admits him to examination.

Nor has Society done with him then.

When he sets up an establishment, Society expects that he will maintain the station of a gentleman; that he will pay his tailor, his butcher, his shoemaker, his baker, his druggist; that he will conduct himself in an honest, straightforward manner, paying everybody his due; and having laid down this law for him, Society, when through its parsimony, inhumanity, or neglect, an outcast perishes in its streets, empannels a coroner's jury of this very tailor, butcher, shoemaker, baker, to victimize this doctor, who is so inhuman as to inquire who is to pay him; this hard-hearted practitioner who, expecting to pay, has the audacity to expect to be paid!

But we are told by the coroner, who by the way was paid for *his* services, that humanity is a great thing—a sacred duty—paramount to considerations of profit and loss. Very good—very fine. But let us extend this principle. Are coroners, judges, lawyers, and coroners' juries, to have the benefit of it?

Humanity, we presume, is not limited to physicing paupers for nothing; humanity is not a merely medical virtue, though Society seems to think so.

The prompt administration of justice is humanity, yet what judge on the bench administers justice for nothing? It is humanity to investigate the causes of sudden or suspicious deaths, yet did any man ever hear of any coroner who sat upon any jury since the time of Alfred, without being paid his fees and his mileage? To feed the hungry, to clothe the naked, to visit widows and orphans in their afflictions, is humanity, yet we hear of no tailor, butcher, baker, who refuses to give bread, beef, and clothes for nothing, being told by coroners' juries that "if he gets no money, he gains the esteem of his fellow work-men."

Will the esteem of his fellow work-men feed the poor doctor, or clothe his wife and

children, or pay house-rent, or taxes, or appear on his frugal board in the shape of a leg of mutton and trimmings? Will the esteem of his fellow work-men preserve him from rusty clothes or an empty stomach, from a distress for rent, or from the Insolvent Court?

Let him go to the workhouse with the esteem of his fellow work-men in his pocket, and he will be set to break stones, or pick oakum, just the same as if his fellow work-men did not esteem him in the least; and when he dies, after a life spent in gaining the esteem of his fellow work-men, by running after sick paupers for nothing, let his widow go before a police magistrate for relief, and she will be lucky, indeed, if the esteem of her late husband's fellow-men enables her to take change out of a sovereign.

Medical men are fair game—their profession is a noble, humane, and liberal profession; therefore, be sure, they are expected to be noble, humane, and liberal enough never to expect payment; they are advertised for in the same way as tallow-candles and scrags of mutton, and for the same use—the use of the parish poor; therefore, be sure, they must be gentlemen, disdaining payment!

They have been, and still are, a profession foolishly charitable, and criminally benevolent, to the injury of themselves, their families, and their fellows; therefore, Society takes them at their word; if they work for nothing, they get no thanks, and if they don't work for nothing, they are rebuked by juries of butchers, bakers, and tailors, who glory in the chance of sitting, once in their lives, in judgment upon a gentleman.—*Young England.*

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

*Members admitted to the Fellowship on the
24th of December, 1844,*

After passing the required Examination.

Alexander Anderson, York Place, Portman Square.—Edward Enfield Barron, St. Thomas's Street East.—Hugh Birt, Arundel, Sussex.—Richard Bushell, Horley, Surrey.—Thomas Chesman, Sheffield.—Holmes Coote, Argyll Street.—Charles Cotton, Lynn, Norfolk.—George Critchett, New Broad Street.—Osbert Fishlake Cundy, St. James's Street.—Booth Edisson, Nottingham.—Edward Furley, Town Malling, Kent.—John Hall, Duke Street, St. James's.—Luther Holden, Old Jewry.—Henry Lee, Dover Street, Piccadilly.—Robert Martin, Holbrook, near Ipswich.—John Millar, Enfield, Middlesex.—Henry Norris, South Petherton, Somersetshire.—Joseph Rix, St. Neott's, Huntingdonshire.—Henry Pratt Roberts, Great Coram Street.—Henry Wyldbore Rumsey, Gloucester.—John

Soden, Bath.—Edward Enoch Tucker, British Iron Works, Pont-y-Pool.—John Henry Walsh, Worcester.—William Ward, Huntingdon.

EDM. BELFOUR, *Sec.*

MORTALITY OF THE METROPOLIS.

*Deaths from all causes registered in the
week ending Saturday, Jan. 11.*

ALL CAUSES 1109
SPECIFIED CAUSES 1107

I.—Zymotic (Epidemic, Endemic, and
Contagious) Diseases, 223; among
which, of—

Small Pox	50
Measles	38
Scarlatina	47
Whooping Cough	24
Croup	7
Thrush	6
Diarrhoea	8
Dysentery	0
Cholera	0
Influenza	4
Typhus	27

II.—Dropsy, Cancer, and other Diseases
of uncertain or variable Seat 94;
among which, of—

Inflammation	0
Dropsy	35
Scrofula	1
Cancer	16
Atrophy	13
Debility	10
Sudden Deaths	9

III.—Diseases of the Brain, Spinal Marrow,
Nerves, and Senses, 145; among
which, of—

Hydrocephalus	32
Apoplexy	22
Paralysis	21
Convulsions	43
Insanity	1
Delirium Tremens	2

IV.—Diseases of the Lungs, and of the
other Organs of Respiration, 406;
among which, of

Pneumonia	120
Hydrothorax	15
Asthma	52
Phthisis or Consumption	137
Diseases of the Lungs, &c.	16

V.—Diseases of Heart and Blood-vessels 40

VI.—Diseases of the Stomach, Liver, and
other Organs of Digestion, 79;
among which, of—

Teething	19
Gastritis	1
Enteritis	17
Tabs	8
Hernia	1
Disease of Stomach, &c.	4
Disease of Liver, &c.	14

VII.—Diseases of the Kidneys, &c. 11

VIII.—Childbirth, Diseases of the Uterus,
&c. 10; among which, of—

Childbirth	8
Disease of Uterus	2

IX.—Rheumatism, Diseases of the Bones,
Joints, &c. 9

X.—Diseases of Skin, Cellular Tissue, &c. 1

XI.—Old Age 77 |

XII.—Violence, Privation, Cold, and Intem-
perance 12 |

ERRATA.—Page 510, 3 lines from bottom of 2d
column, for "cities," read "cavities." Page
511, 12 lines from bottom of 1st column, for "it,"
read "life."

WILSON & OGILVY, 57, Skinner Street, London.

THE LONDON MEDICAL GAZETTE,

BEING A
WEEKLY JOURNAL

OF
Medicine and the Collateral Sciences.

FRIDAY, JANUARY 31, 1845.

LECTURES
ON THE
NATURE AND TREATMENT OF
DEFORMITIES,

*Delivered at the Bloomsbury Square
Institution.*

BY R. W. TAMPLIN, F.R.C.S.E.
Surgeon to the Institution.

Treatment of contraction of the knee-joint in the flexed position—mechanical and surgical. Means of forming a diagnosis. Case of contraction from inflammation successfully treated mechanically. Signs which may be considered favourable; signs which are unfavourable. Section of semi-membranosus, semi-tendinosus, and biceps; mode of performing the operation. Contraction of gastrocnemius as a consequence; contraction of the flexors and adductors of the hip as a consequence—treatment of. Dislocation backwards of the tibia on the femur—treatment of.

WE now proceed to the treatment of contraction of the knee-joint; it consists of mechanical, or mechanical and surgical combined. It is of the greatest possible importance that you should satisfy yourselves, as far as the case admits of, of the actual condition of the joint, which you will be enabled to do by a reference to the original cause, the duration of the deformity, and the amount of motion, if any, in the articulation. Now the first thing to be ascertained is, whether the disease in the joint has subsided, supposing the contraction to have arisen from that cause, as I need not tell you, that if disease should still be present, it would be imprudent to adopt any active measures to remove the contraction. This you will easily discover by examination of the joint, and by the feelings of the patient. We have at this moment a female about 16

years of age in the Charity, who was sent up a distance of 80 miles from the country; and, upon examination, I found an increased quantity of synovia in the joint, indicated by the prominence on each side of the ligamentum patellæ, as well as by the sense of fluctuation evident on pressure being made. Pain from motion of a shooting character, especially when subjected to a sudden jar; pain also at night, increased, in all probability, by the movements taking place during sleep. The knee contracted to a right angle, and rigidly so; and any attempt to extend the leg increased the rigidity of the flexors, and also gave pain in the knee itself. This affection was occasioned by simple inflammation of the joint eighteen months previous to her admission, but which had subsided, at least the active symptoms, twelve months since. I did not think it advisable, under the circumstances, to have recourse to the operation, but recommended she should be sent to a general hospital until the disease was entirely gone. The Committee interested themselves, but without success, the girl being refused admission on the ground that rest alone was necessary. As, therefore, there was only one alternative, that of sending her back into the country, I thought it would be advisable to endeavour, by careful extension, to straighten the limb by mechanical means alone, so that, in the event of a recurrence of the inflammation, she would at all events be in no worse condition than she then was, whereas, if I succeeded, it would be of immense advantage to the patient. I therefore applied the iron splint, with the male and female screw attached, and to my surprise, the leg has been restored to its straight position; so that here is an instance, proving to you the possibility of drawing out the contracted muscles, and thus overcoming their tendency to contract, without the operation, provided the contraction has not existed sufficiently long for it to

become permanent, and before the disease has actually subsided.

After, then, you have satisfied yourselves of the cause, you will proceed to ascertain, 1st, if there is motion; 2dly, what is the amount of motion; 3dly, what is the *nature* of the motion, and the cause of resistance,—whether that resistance is owing to the muscles alone, or to the muscles and joint itself combined; also, what voluntary power, if any, the patient possesses at the time present. After these preliminary inquiries, let an assistant hold the thigh firmly, whilst you attempt to extend the leg forcibly. If you are able to extend it in the slightest degree, if the patient complains of pain on the anterior surface of the joint, however slight the motion obtained in this way may be, your prognosis will be favourable; and even in those cases where there is no perceptible motion, as in the cases I have described to you of injuries to the joint, in my last lecture, if the patient complains of pain in the situation mentioned, you may anticipate the possibility of removing the contraction. It is also as well to examine the patella, and to ascertain whether it admits of motion in a lateral direction, which you can do in the following manner. Place the thumb or finger of the left hand on the edge of the patella, and with the thumb of the right hand forcibly press on the other side. If there is motion, you will of course feel the edge which is pressed upon depressed, and the opposite edge raised. This is very easily accomplished in some cases, but in others the patella will appear immovable, and require the greatest caution and care before you can be satisfied whether motion exists, as the sensation conveyed by the skin alone, in moving when pressed upon, is likely to deceive you. Here also you will be guided in these difficult cases by the circumstance of the patient complaining of pain, not on the points pressed upon, but beneath the patella, in the joint. Should they do so, you may rely upon it that the patella is not ankylosed either to the femur or the tibia. The patella, in severe cases of contraction, becomes lodged between the condyles, and is firmly held by the rectus above and the ligament below, so that it is often not an easy matter to find or to satisfy yourselves of its position, much less to determine its immovability. I have myself repeatedly been compelled to examine with the greatest care before I could discover it at all. Having satisfied yourselves there is motion, you will then look to its character. If it is a steady motion, and upon an increase of extension the flexor tendons are rendered more tense, you will regard the resistance as confined to the muscles principally; if, on the other

hand, you find upon keeping up the extension for some seconds, that the joint returns to its contracted position with an elastic impulse, you may anticipate resistance, arising from adhesions in the joint itself, and of course you will be more guarded in your prognosis. If you find free motion beyond the contracted or flexed position, that is, if you are enabled to increase the amount of flexion without difficulty, with as much ease as can be done ordinarily, this will be a favourable circumstance. And of course you will, in forming an opinion, look at these indications collectively, having a due regard to the original cause.

If, on the contrary, the joint is immovable, and occasions no pain upon examination; if, in continuing your extension, the muscles relax themselves, and there is no motion or pain, you will regard these as unfavourable indications, and it is hopeless to attempt restoration by the ordinary methods. If you have free motion to a certain point, and the motion becomes suddenly checked, as if by a solid substance, giving you the sensation of its being stopped by a spicula of bone, this also must be regarded as unfavourable. I have seen three cases of this kind, where I believe the patella had become ankylosed to the femur, and from the tibia being drawn backwards somewhat behind the condyles of the femur, the moment the leg was extended to a certain point, it received a dead check stop, evidently caused by the patella being firmly fixed, and pressing on the anterior surface of the head of the tibia, whenever the latter was brought to the point at which the patella was immovable; the joint being freely moveable up to that point in each case.

These are, then, the principal indications for or against the ordinary treatment being followed; I say ordinary, for you must be aware of the femur having been sawn through in cases of complete ankylosis, and immediately afterwards the leg being placed in the most favourable position, so that the bone should become united in the position adopted. This experiment is said to have been successful; but it is quite another affair, and a mode of practice I have not thought it advisable to follow.

Having, then, satisfied yourselves of the probability of being enabled to remove the deformity, you will decide as to the means to be adopted, whether mechanical alone, or surgical and mechanical combined. In all cases where the deformity has been of short duration, and where there is tolerably free motion, I would advise your selecting the mechanical alone, whether the contraction is to a greater or less extent. Bandaging the leg carefully, from the foot above the knee, and adjusting the leg in the position in which it is, in the ordinary knee-splint, with

the male and female screw beneath the joint, and to which I have added a metal plate, to hold the thigh firmly in position, taking care that there is no undue pressure, by straightening the splint more rapidly than the leg can follow, and thus inducing pressure on points, these points being generally just above the heel posteriorly, and the anterior surface of the thigh, just above the condyles, as well as at the extremity of the splint behind the thigh. If, however, the deformity has existed for any length of time, whether it is severe or not, I would advise section of the tendons of the contracted muscles, as well as any dense bands of fascia you may meet with; for in old cases the fascia becomes contracted, and at a greater distance from the popliteal space; and oftentimes you will find, upon examination, the region of the popliteal space filled with one dense mass of contracted fascia, and what I imagine to be thickened and condensed cellular tissue: when it presents this appearance, I need not tell you it would be dangerous to divide the fascia beyond the superficial bands. The patient, then, will be laid horizontally on his face, and an assistant will grasp and extend the leg; you then feel for the tendons, and, as a rule, the biceps flexor femoris will be found more tense than the semi-membranosus and tendinosus. There are, however, exceptions to this rule. Should this be so, you will pass a small sharp-pointed knife on the inner side of the tendon, and beneath it horizontally, or as nearly so as you can, and as soon as it extends to the breadth of the tendon, turn the sharp edge of the knife towards it, and divide it from within outwards (that is, from the popliteal space). After having divided the biceps, you will proceed to feel for the tendons of the semi-membranosus and tendinosus, and should they be prominent, pass the knife, on the inner side of the tendons, beneath them; depress the handle, and divide them from within outwards, as in the other instance. You will then examine carefully for any additional source of contraction, as the bands of fascia mentioned; and if you find them tense, and you can get at them with ease, divide them, but run no risk; for you must recollect that there is the vein, nerve, and artery, and the possibility of an irregular distribution, and the possibility also of a change in the relative position of the vessels, or of their being included in this mass I speak of; and although very frequently you will find it an easy matter to divide the tendons of the contracted muscles, and one or more of the clearly-defined bands of fascia, yet in some cases you will experience the greatest difficulty (strange as it may appear) in satisfying yourself that you have even divided the tendons, however clearly defined

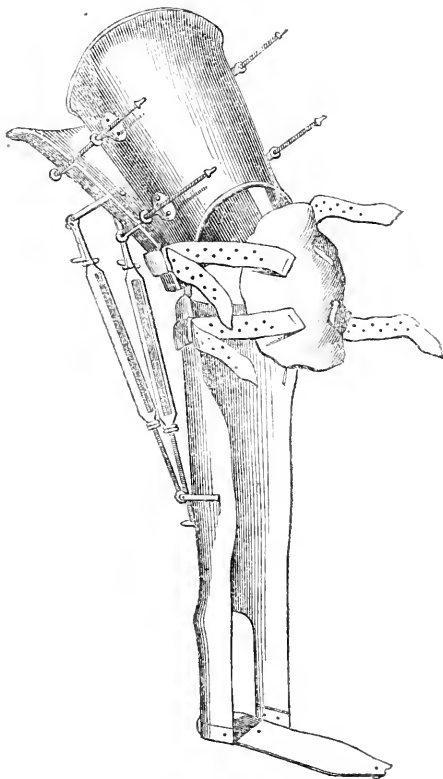
they may have been, and however positive you may feel that you have passed the knife beneath them. This arises from the contraction of tissue which will be felt remaining, and in the position of the tendons; and you may insert your knife again and again, and still feel the chord or chords left, giving you the sensation that the tendon, or a portion of it, still remains. The same remarks apply to the fascia. I would advise you, therefore, to be cautious, and in such cases to rest satisfied with the division of the principal portions, for if you have succeeded in dividing the tendons, you will generally be enabled to bring the leg straight. This applies to simple contraction, without any alteration in the relative position of the bones. If you have also the inward inclination I have spoken of, which can be told by the prominence of the internal condyle of the femur; and if the tibia is rotated slightly on the femur, which I also mentioned to you, you will generally find it necessary to divide the vastus externus and fascia lata, in the manner described in a former lecture. After having completed the operation, pledgets of lint should be placed over the parts of puncture, sufficiently large to prevent any venous bleeding; for you will recollect that the popliteal space is filled with loose cellular tissue, and easily admits of effusion of blood (provided a moderate degree of pressure is not carefully maintained). Retain the lint with long strips of adhesive plaster and bandage, and support the leg with a tin splint, bent at the angle at which the leg is contracted. Allow the lint to remain for a week, provided there is no pain, at the end of which time you will find the punctures healed, and all risk of their reopening effectually prevented. By too early extension, remember, you may irritate the parts of puncture, and be delayed in treatment. We have had one or two cases where a little venous hæmorrhage took place internally; and from proceeding too soon with the extension, inflammation set up around the points of puncture, and the clot, although small, ulcerated out, occupying about six weeks in healing, during which time nothing could be done; and a patient is now upstairs in whom I divided the biceps flexor femoris and vastus externus, for knock-knee, which some of you witnessed, where also this occurrence followed, although in a less degree, but occasioned, in like manner, from too early extension; therefore nothing is to be gained by commencing extension too quickly. I think, however, a week sufficient. In my own practice I always wait that time, and do not consider it prudent to commence sooner, from the quantity of loose cellular tissue occupying the popliteal space. You then apply the means of extension; and in a simple contraction, the ordi-

nary splint, with the plate mentioned to hold the thigh down, you will find the most easy method, both for the patient and yourselves, taking care not to proceed more rapidly with the extension of the splint than of the knee, and being guided in your progress by the feelings of the patient. The extension of any joint that has been long in one position is always attended with pain; and in the knee they will invariably point to the anterior surface of the joint; so that you must proceed according to the feelings of the patient and the resistance met with, which will of course depend on the original cause of the deformity, and the consequent condition of the joint.

In paralytic and congenital cases.—In cases arising from injury to the spinal chord and column, you will not, as a rule, find

much impediment in the joint itself. In cases arising from injuries to the joint, in rheumatic contractions, and in some cases where there has been inflammation of a long and continued character, you will find a greater or less resistance in the joint itself, and of course a more slow and tedious process of extension, and greater care will be requisite throughout the entire treatment. If, then, you have, in addition to the contraction, a lateral displacement, you will find this splint which I had made, and which I have used with great advantage, the best and most simple means to adopt (vide Fig. 1); it has a double action with the male and female screw behind, as in the former instance, and also at the side, so that at the same time that you are extending the leg, you are removing the lateral displacement.

FIG. 1.



The above diagram represents the splint alluded to, which, by its possessing a double action, admits of being applied to any amount of contraction combined with outward inclination of the joint.

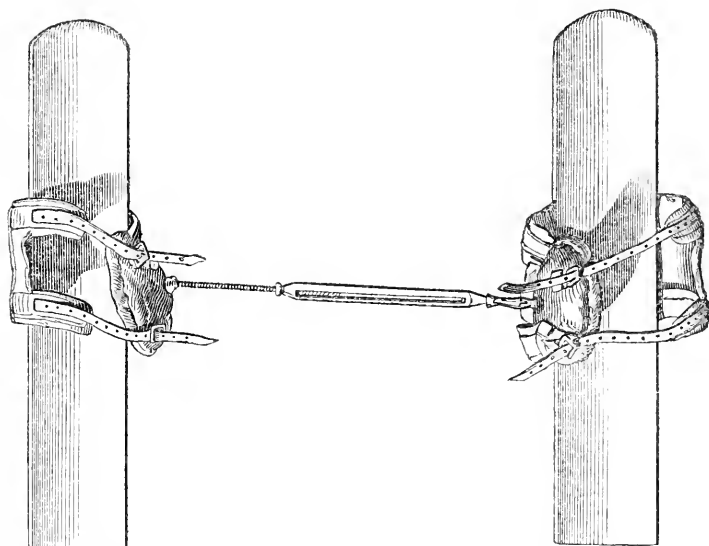
In either case you proceed gradually and with care, until the leg is brought into a perfectly straight position, for if you do not, or cannot accomplish this, rely upon it a relapse will follow from slight neglect. After the leg is brought into the straight position, you will do well to keep it so for some time, until all tendency to relapse is overcome, *i. e.* until you find it remain in that position when out of the instrument. You then order an upright support, from the hip downwards, which will hold the knee straight and enable the patient to take exercise, and direct him to exercise the motions of the joint as much as possible, so that the cure may be rendered perfect. The best means of restoring the motion of the joint, is by placing the leg in the instrument, and to flex and extend it by means of the screw; it is a more steady and certain proceeding, and one which is by far the least painful to the patient.

In these confirmed cases of contraction at right angle, or beyond it, the gastrocnemius, from its long flexed position, does not possess the power or means of being properly extended, certainly not with exercise. It therefore will be found to have contracted up to the point at which it has ceased to be elongated, but this will not attract your attention, nor have you the means of ascertaining whether it be so, until you have made considerable progress with the extension of the knee, when the heel will be found contracted at or beyond a right angle; the patient possessing all the voluntary power, but being unable from the contraction to flex the foot beyond a right angle, or even to that point. Several cases of this kind have occurred at this Charity. I have been compelled after the knee has been straightened to divide the tendo-achilles, and in this way the cure became perfected. It is a simple affair, inasmuch as there is no resistance in the joint, nor any great amount of shortening or contraction, and as soon as the tendon is divided, with ordinary care you may flex the foot to its full extent in fourteen or twenty-one days, when the patient possesses the free use of the ankle-joint. Occasionally you will have also contraction of the flexors of the hip-joint, especially if the thigh has been constantly held by the patient flexed upon the pelvis. This is a much more serious and difficult complication, for after you have straightened the knee the patient does not possess the power of standing erect; because if the back is straight and in the perpendicular position, the thigh being flexed more or less acutely, the leg is thrown forwards, and if the leg is in the perpendicular position, the pelvis is thrown backwards; this proceeds from the yielding of the lumbar vertebrae; they being drawn by the psoæ muscles, so that great difficulty and

inconvenience is experienced when the patient attempts to walk, together with great lameness, giving the appearance of a person afflicted with disease of the hip-joint. In this instance, the principal muscles contracted are the psoæ, and it is a difficult and dangerous proceeding to divide them, although I believe it has been done by Stromeyer. I would advise the following proceeding:—let the patient lie flat on his back, with his legs off the edge of the bed; a pillow being placed beneath the lower part of the back, so as to raise the pelvis above the level of the rest of the body, of course as the thigh is contracted, the leg will be considerably above the level of the body; then attach a weight with a band just above the ankle joint, and direct this to be done as long as the feeling of the patient will admit, two or three times daily, increasing the weight by slow degrees; in this way a stretching is kept up in the psoæ muscles, which will by perseverance relieve, although it will not remove the contraction, and enable the patient to get about much better than he could otherwise have done.

Forcefully extending the thigh several times a day with the hand is also beneficial, by getting an assistant or domestic to hold the pelvis as firmly as possible, whilst another with considerable force presses the leg downwards; should you find the rectus, sartorius, tensor vaginæ femoris contracted as well as the psoæ, divide as many of them as can be done with safety. The method of doing which I shall point to you when I come to speak of contraction of the hip-joint. Occasionally, also, you will find the thigh not only flexed but adducted, so that when the leg is brought into the straight position, it is thrown over its fellow. One case is now in the wards, where this condition exists in both thighs, both knees being contracted, with the general spasmodic condition of all the voluntary muscles. If it exists in both limbs, you must as soon as the knees are restored to their straight position commence extension, either with or without section of a portion of the adductors. This may be done in two ways, either by fastening a bandage at the side of the bed, and passing it round the thigh on each side, or else by means of this instrument, (vide Fig. 2), which I have had made for the express purpose. The first method is the most simple and efficient; though only one thigh should be affected, you must still fasten a bandage round each of them, to enable you to act on that which is contracted. In this way you will be enabled to remove the contraction sufficiently to enable the patient to use the limb with comparative freedom; you must, however, keep up this extension night and day, as in other instances, and when the thighs are sufficiently apart to enable the

FIG. 2.



The splint represented in the above diagram consists of two horizontal portions, having in the centre of each a moveable pad, made concave internally, to correspond with the convexity of the inner side of the knee-joint. These pads are united by means of a male and female screw, which allows of their being brought closely together. Straps are attached to encircle the knee, so that it may be fixed in the position desired. By gradually elongating the screw, the legs are insensibly separated to any extent.

patient to sit astride in a chair, let them adopt this method several times a day, sitting with their faces to the back of the chair, upon which they can rest their arms. I must not forget to call your attention to another complication occasionally met with, and which I partially alluded to, namely, displacement of the tibia backwards, (vide Figs. 2 and 4 of last lecture); this sometimes takes place to a great extent, and you have no means that I am acquainted with of remedying it during the time you are extending the leg; you may perhaps do so in part, but not altogether. When this deformity exists after you have straightened the limb, you will find the condyles of the femur projecting to such an extent, as to press almost entirely on the anterior edge of the articular surface of the tibia; in fact, it looks just as you may imagine a dislocation of the tibia backwards would look. And in one case, of which this is the cast, a girl of 19 years of age, (vide Fig. 2 of last lecture), who was an in-patient of the Charity, when the leg was straightened this was the actual condition, and as far as I could discover, the articular surfaces did not touch at all, the head of the tibia appearing to have receded behind the condyles of the femur into the popliteal space; the condyles themselves projecting abruptly, and giving the knee a most curious and unnatural appearance, and rendering it per-

fectedly impossible for the girl to have borne the weight of the body on the leg without forcing the tibia still higher up. It was, in fact, a complete dislocation of the tibia backwards. There must have been an immense elongation of the crucial ligaments, similar to that represented in the diagram (Fig. 4) of last lecture; and were it not for the successful termination of the case, I should have thought they had been completely obliterated. It is the only case I have witnessed to such an extent, although it is by no means uncommon to find this disarrangement partially existing; in whatever degree it must be remedied, as the exercise of the limb in this position must, mechanically, increase the deformity and occasion a return to the malposition, independently of the perfect impossibility of the natural motions of the joint being restored. The means I have adopted, and which perfectly succeeded in the severe case alluded to, and with comparative ease to the patient, consisted of a bandage passed beneath the pelvis on the inner side of the thigh of the contracted leg, well padded and fastened to the head of the bed, the patient lying in the horizontal position on her back. The foot and leg were then carefully bandaged, and the instep padded. A strap was then passed in the figure of 8 form, from above the ankle and over the instep, which strap was attached to a bandage fastened at the

bottom of the bed, a board being fixed there perpendicularly, so that the leg might be slightly raised above the level of the bed. By these means extension was gradually kept up, and as soon as I imagined the head of the tibia was brought down parallel with the extremity of the condyle of the femur, I applied a straight splint behind the leg, extending some distance above and below the knee, padded at each extremity, and fixed by means of straps. A broad webbing strap was then applied just above the condyles, passing round the splint, and was gradually tightened; which, by its action, tended to draw the condyles of the femur backwards, whilst the counter-pressure of the pad and splint below the knee, behind the upper portion of the tibia, had a direct effect to force the tibia forwards. This it effectually did, and without putting the patient to any amount of pain. This, therefore, is the plan I adopt, and which I should advise being followed in all cases of this description. It possesses one great advantage, simplicity in its application, certainly in its result, and it does not unnecessarily confine the patient, or occasion any undue pressure, with ordinary care. If they move out of the straight line, so much the better, as it increases the amount of extension, and assists the cure. We have had, in one case of a female who possessed that unhealthy, fat, flabby condition occasionally met with, phlegmonous erysipelas set up, resulting in sloughing of the cellular tissue at the back of the thigh. The patient had complained of little pain; but on one occasion when I visited her, I found the pad damp behind the knee, when, removing the instrument and bandage, the skin presented that reddish-brown indurated appearance which is so characteristic of this disease, together with bullæ here and there disseminated. I immediately made a large opening at the back of the leg, and let out a large quantity of sanious matter and sloughed cellular tissue. Poulitices were applied, and the limb supported throughout, together with the administration of opium, stimulants, and nourishment of every kind; and the girl perfectly recovered from the effects. The leg was afterwards straightened, and she left the Charity with a useful limb.

I have thought it necessary to go thus into detail, as I know of no cases of contraction that are likely to give you more trouble, or occasion more anxiety, as you will scarcely ever meet with two alike; and without the greatest care all your efforts will be frustrated. The causes vary so much, not only *per se*, but in their effects, that in proportion to the change that has taken place in the joint itself, or in the synovial membrane covering it, will be the difficulty attending the treatment. These changes,

unfortunately, cannot be accurately ascertained. You may, with the directions I have given you, form an opinion; but this, as in every disease met with, must occasionally be erroneous; for occasionally we cannot foretell what, or if any, adhesion exist in some cases; neither can you tell the precise condition of the synovial membrane and ligaments. In fact, there are no cases in the range of deformity so difficult, tedious, and embarrassing as these.

It is a curious circumstance, and one that I am unable to explain, that the pain these patients complain of is always on the point of the knee, in one spot, and not diffused over or through the whole joint, as we should *a priori* have anticipated, whether the knee is contracted in the straight or flexed position. The time occupied in treating these deformities will vary, according to the age of the patient, the cause producing it, and the length of time the affection has existed. In cases arising from punctured wounds, I have succeeded, contrary to what I should have anticipated, in restoring the position in six or eight weeks. In cases arising from scrofulous disease about the joint, in three or four months (I am speaking of adult cases). In younger subjects, after the operation, it can be done in six or eight weeks. In cases occurring from rheumatism, from three to six months or nine, as this of all the causes appears to destroy the integrity of the joint the most rapidly, and to become irremediable in a comparatively short time; so that no delay should take place in the treatment, provided treatment is decided upon. In these, as in all deformities, never omit artificial support, until the balance of power is restored between the flexors and extensors, as, if you do, whichever may preponderate in power will, from my experience, certainly become contracted, and occasion a permanent condition of one of the motions of the joint.

OBSERVATIONS

ON THE

NATURE AND TREATMENT OF THE MORE IMPORTANT DISEASES OF THE NERVOUS SYSTEM :

With Illustrative Cases.

By EDWARD BLACKMORE, M.D. Edinb.

Member Extraordinary of the Royal Medical Society of Edinburgh, and Physician to the Bath Penitentiary.

Medico minimum est de Arte loqui :—
Multo maximum est ex Arte facere.

(For the London Medical Gazette.)

THE cases in the present essay are selected with a view to illustrate the

pathology and treatment of apoplexy, palsy, water in the head, epilepsy, tetanus, chorea, convulsion, hysteria, and insanity.

The observations are founded on a collation of cases which have come under the notice of the writer, and the majority of which have occurred in his own practice in the course of the last twenty-five years. The deductions are concise, and meant simply to direct attention to the narratives of the cases, from which it is believed that the student of his profession may best derive for himself the more useful suggestions. They who are engaged in the bustle of practice will excuse the interrupted and aphoristic form of the observations, and will regard them as mere hints for reflection. The young practitioner may, it is hoped, find in them some aids to relieve him from the embarrassment of the sick-room; and the more experienced may be reminded by those narratives of many interesting incidents in his own experience, although he may not learn from them any novel facts.

CLASS I. THE COMATOSE AFFECTIONS.

Section I. On Apoplexy.

A most important and interesting feature of apoplexy—whether idiopathic or secondary, of the simple form or attended with convulsions or palsy—is, that its invasion is seldom absolutely sudden and without premonitory signs—signs sufficient to rouse the attention of the patient, or of a vigilant observer, and to lead to precautions by which, in many cases, the complete attack, or its fatal consequences, might be prevented.

These premonitory symptoms are, indeed, very diversified: sometimes they are long antecedent to the fit; sometimes pre-existing only for a few days or hours; sometimes they are continued, more often remittent.

They may be viewed as referring principally either to the functions of the brain, or to those of the digestive organs.

1. The symptoms chiefly referrible to the nervous and sanguiferous systems present themselves under two forms:—

a. That marked by plethora in the system, or by increased vascular action about the head—the common form of sanguineous apoplexy. The particular

symptoms are shivering; headache, dull and oppressive, or acute, constant or remittent, in some cases singularly subsiding shortly before the apoplectic invasion; delirium; slight convulsion; feelings of heat and turgescence in the head; a throbbing at the temples; swelling of the face, which is pallid and cold, or flushed and heated; vertigo in the common form of seeing objects in motion, or the more alarming kind, feeling himself in motion; momentary loss of vision; sleeping, or lethargy not amounting to stupor, attended with a sense of lassitude, apparently from debility, but which is really from incipient pressure on the brain; while the pulse is becoming full, firm, and slower than ordinary.

b. The second form is a state remarkably different from the former, characterized by a leuco-phlegmatic habit; pallidness and coldness of the face; lowness of spirits, sometimes amounting to mental despondency; nervous irritability; and, in some cases, deceptive hysterical symptoms; slight transient paralytic feelings; giddiness; intolerance of strong liquors; a weak irregular pulse; transitory sickness and faintness. In some cases, in exhausted constitutions, an increase of debility shortly before the apoplectic attack; in others a wonderful transition from a state of great and protracted weakness to one of vehement action of the whole vascular system, and particularly of the arteries about the head, which has required the loss of thirty ounces of blood from the temporal arteries before it could be controlled.

2. Another class of symptoms refers to the state of the stomach and bowels. In some cases they are those of a long and habitual dyspeptic affection, without head symptoms adequate to excite a suspicion of the serious disease which is forming in the brain. Dyspeptic symptoms during pregnancy, and appearing to proceed from uterogestation, are sometimes occasioned by latent disease in the head, which is to end in apoplexy. Sudden vomiting is, in some instances, the earliest symptom premonitory of the most dangerous form of apoplexy: in one case there was vomiting of all the ingesta for six weeks before the fatal coma! Costiveness is a frequent precursor of sanguineous apoplexy; and the interruption of the action of the intestines for a

single day has had an injurious effect on the brain.

The phenomena of the fit are as diversified as those of the antecedent state, *e. g.*—

a. Sudden profound coma, with depression of the vital powers, or syncope, rapidly fatal, without re-action.

b. Coma, more gradual, attended with a momentary depression of the vital powers, to be followed by strong reaction or inflammatory symptoms.

c. Coma, with a full, swollen, heated state of the head, and throbbing of the temporal arteries; and

d. Coma, with a tumid, pallid, cold face, and cold extremities, but with a distinct pulse—a state which might easily be mistaken for one of collapse of the vital powers from a sedative influence, and in which an error in diagnosis would lead to serious consequences. A most impressive example of this variety occurred to me in a robust child, three years of age, who was one morning suddenly affected with extreme languor, paleness, coldness, and loss of sense—a state exhibiting a combination of lethargy and syncope: it was the third attack of a similar nature in six months. There was evidence of a torpid liver shortly before the attack, which fortunately suggested the appropriate treatment.

Apoplexy is frequently a secondary affection, supervening on various diseases, particularly

On gout, and that with fewer premonitory symptoms than usual;

On inflammation in the lungs, of which Case I. is an example;

On diseases of the heart and aorta, which is often unsuspected;

On disorder in the liver, particularly when attended with icterus, or with ascites;

On chronic dropsical affections, in which the febrile excitement has seemed to have conduced to the cerebral congestion;

On protracted inflammation in the stomach or intestines, in a scrofulous constitution;

On disease in the kidneys, especially when attended either with albuminous urine, or with a suppression of urine;

On disease in the spinal cord, whether acute or chronic, of which Case VIII. is an interesting example;

On chronic epilepsy, as in Case IX.;

On a very deceptive remittent and

protracted form of inflammation in the brain, of which Cases I. IV. VII. are examples;

On organic disease in the encephalon, as in Case X., the symptoms of which—prolonged vomiting and costiveness—indicated rather a disease in the intestines of the nature of ileus.

The slightest symptoms of disorder in the head supervening on other diseases, particularly in a cachectic constitution, require the most vigilant attention, for it unfortunately often happens that their importance is not always duly estimated. The symptoms of the primary disease sometimes remit or disappear, while the morbid irritability and plethoric or inflammatory diathesis of the constitution remains, to become a prolific source of no distant danger. In some cases every other symptom of this antecedent morbid state disappears, but the pulse continues high and firm, and full of warning to the practitioner. Sometimes, however, even the pulse is deceptive, and falsely betokens convalescence.

It is true, indeed, that a slow full pulse, after the cure of an inflammatory disease, may be a sign merely of the exhausted excitability of the vascular system. I have known it, in such a condition, fall from 80 to 40, and excite great alarm, yet by a judicious cordial treatment it has become natural, and been followed by perfect recovery; more generally, however, a slow pulse, after an inflammatory or congestive disorder, should be viewed as a sign of danger threatening the brain.

If a severe disease in the thoracic or abdominal viscera, or a disease from a powerful exciting cause, as severe exposure to cold, or too high living, has not been treated by adequate remedies, a serious secondary brain affection may often be expected; and this particularly, if the tongue remains white and loaded, although the other symptoms may have improved. The slightest headache is in this state important: if it is neglected, one premonitory symptom will succeed to another; fulness of the face, noises in the ears, vomiting, and a slow unequal pulse, until shortly the paroxysm sets in in its full force.

It cannot be too strongly impressed on the mind of the practitioner, that the premonitory symptoms of both primary and secondary apoplexy are often in-

adequate signs of the severe attack that is forming itself. In order to estimate aright their real import, the character of the constitution should be well considered, and not merely their actual violence. In irritable, scrofulous, gouty, or cachectic constitutions, symptoms apparently insignificant turn out to be highly important. I have seen in a patient with a constitution broken by syphilis and mercury, a slight headache, attended with giddiness and a slow pulse, unexpectedly terminate in fatal coma. Death has also occurred, in such a subject, unexpectedly, without coma, when the symptoms appeared to be merely a threatening of an apoplectic attack, the only alarming symptom being the pulse falling to 46!

In strumous subjects, also, where merely slight symptoms of encephalic disorder—as headache, vertigo, confusion of thought, and debility of mind—have existed for some time, with impaired power of voluntary motion of any part, apoplexy is liable to be induced on the slightest occasion. The vascular system in such subjects is so irritable or so weak, that when the vessels of the brain are distended and dilated by a load of blood, their contractile power is destroyed, and, in consequence, a congestion, at first slight, increases progressively, until the apoplectic condition is fully formed. In such subjects, also, a previous softening of the brain favours a diffused effusion of blood that is inevitably fatal.

It is consolatory, however, to know, that, in many cases, severe symptoms have passed harmlessly away on a recourse to remedies, or even without medicine, by the action of the healing powers of the constitution, manifested particularly in an eruption of boils, or of erysipelas, or gout.

The *prognosis* is bad when apoplexy is the sequel of severe antecedent disease. Tonic spasm, involuntary stools and urine, a renewal of convulsions, dilated pupils after a contracted state of them, a different state of the two pupils, as one being fixed and dilated while the other is contracted, a quick irregular pulsation or slow pulse, mucous rattles in the throat, and a failure of animal heat, are fatal symptoms. In some cases a *deceptive amendment* is seen just before the fatal termination! Black blood seen in bleeding, particu-

larly from the temporal artery, is a bad sign. Reaction following a depression of the vital functions is not of itself a ground of hope. Coma of twelve hours duration may end in recovery; its importance is to be judged of more from the state of the vital functions and of those of the spinal cord, than from its mere continuance: and even exhaustion of those functions is not always hopeless, if it arise from incidental circumstances rather than from pressure on the medulla oblongata; the recognition of the former cause is founded on the regularity of the pulse and of the breathing, and on the coma being less profound. Coma succeeded by a phrenitic state is hopeless; and also when following bronchitis: in some cases, however, profound apoplexy, when it has been preceded by decisive symptoms of chronic inflammation in the brain, is not fatal, as seen in Case XIV.; but there is great danger of its recurrence, at an uncertain interval. Apoplexy succeeding to icterus, and to suppression of urine, and to the retrocession of gout or of erysipelas, is generally fatal. Coma after concussion of the brain, even of many days continuance, but not profound, is not hopeless. See Case XVI.

The most common morbid appearances in apoplexy are excessive enlargement and sanguineous engorgement of the blood-vessels in the brain. This state is seen to exist, either by itself, or in complication with other morbid conditions: *e. g.* (a) effusion of serum; (b) effusion of blood, circumscribed or diffused, co-existing with simple dilatation of the vessels, or with disease of their coats; (c) extensive softening or ulceration of the medullary substance (Cases II. III.); (d) encysted suppuration (Case IV.); (e) tubercular disease (Case X.).

In cases where no morbid appearances are found, which were formerly styled nervous apoplexy, and more lately simple apoplexy,—it is not to be inferred that this is a true type of the vascular condition of the brain at the time of the invasion of the fit. In the first case hereafter narrated, it is obvious that the active treatment shortly before death must have tended to efface the natural characters of the disease during life: and death itself so much favours the contraction of the previously dis-

tended vessels, and even the absorption of effused serum, as to produce the deceptive negation of the usual anatomical characters.

As to the pathology of the disease, it is evident, from the symptoms and the morbid appearances, that the immediate cause, in a large majority of the cases, is a rush of blood to the brain, occasioned by the vehement action of its arteries; and it is probable that this spasmodic action of the vessels continues until, from the failure of the respiratory function, black blood is circulating in the head. And indeed, even this condition of venous blood being in the arteries of the brain, does not instantly put a stop to the excessive vascular action; for while the temporal arteries have been violently throbbing, the blood drawn from them has been seen to be black.

It is no disproof of this view of the proximate cause of the fit, that sometimes, from the moment of its invasion, the pulsation at the temples is low and the face cold; for the capillary branches of the internal carotids are unquestionably sometimes in high action when the branches of the external carotids are in an opposite condition. This view is easily understood from hydraulic principles, and is confirmed by the fact, that on lessening the determination of blood to the brain, the circulation in the exterior of the head is seen, in these cases, to become excited.

It is not manifest that venous congestion is ever the immediate cause of the apoplectic state. Even in the case that most favours this supposition,—in apoplexy connected with disease of the thoracic aorta or of the heart, the accumulated blood in the veins appears to act as an irritant to the capillaries of the brain, which are thus excited to spasmodic action; or the apoplectic congestion may be explained on the supposition, that in the irritable state of the vascular and nervous systems, so often attendant on disease of the heart and arteries, the ordinary mental and physical agents become sources of irritation to the cerebral vessels, which then pump up an inordinate quantity of blood into the brain. This reasoning may also be applied to an apoplectic state supervening on the whooping cough.

The suspension of the functions of

the brain appears to be referrible to the pressure of the accumulated blood; and partly also, to the influence of undecarbonised blood on the medullary substance,—as appears from the fact that the coma does not always go off as soon as the pressure must have been relieved by the depletory remedies.

The phenomena have been referred by some pathologists to interruption of the circulation rather than to the influence of pressure; on the assumption that the quantity of blood in the whole encephalon is invariable, and that from the structure of the skull an accumulation of blood can only take place in one order of the cerebral vessels, the other orders being then in a state of comparative bloodlessness. It is, indeed, demonstrable that the capillaries and the large vessels of the head are not always in correlative states of plethora; and it is equally certain that the brain does suffer in its function from a load of blood in it. I have seen a case of hydrocephalus, in which the coma was relieved on the sutures giving way, and widely separating; a proof that the brain had been suffering from compression.

This view of the pathology of the disease refers to the cases that more commonly come under medical observation. There is also a class of facts that renders it probable that the apoplectic engorgement of the brain is not invariably attended with high action of its vessels; *e. g.* in apoplexy from a sun-stroke in hot climates, and from lightning; in which cases the vessels are turgid, and extremely relaxed and dilated, as if their contractile power had been rapidly and entirely destroyed by the peculiar influence of the exciting cause. I have seen also this state of the head in a man found on the seashore dead from drunkenness. In the fatal lethargy from intense cold, also, a similar state of atony and fulness of the vessels of the brain seems to be induced: and it is probable that the condition of the brain is similar in the slow invasion of coma from narcotic poisons, particularly hemlock, and from foxglove, and from prussic acid, when the dose was insufficient to kill instantly.

The effusion of serum does not seem to be in any case the cause of the invasion of apoplexy; it certainly serves

to maintain the comatose state, although it probably contributes less to it than the vascular congestion does.

The diffused effusion of blood appears to be more closely related to the attendant softening of the brain than as a mere coincident. Extensive softening seems, in Cases II. III., to have persisted for some time, and to have given a predisposition to the sanguineous effusion on the occurrence of active determination of blood to the head. It is obvious that, in such an antecedent state, a very slight increase in the momentum of the circulation would be likely to terminate in effusion. This softening is not always referrible to inflammation in the brain: it appears sometimes to arise from defective nutrition of the organ, as in Case III., where it was connected with poverty and mental depression.

The apoplectic engorgement connected with previous protracted inflammation in the brain, is well exemplified in Cases I. IV. and VII. This inflammatory state is especially insidious; it is not adequately manifested in the state of the pulse, or in the symptomatic fever; and when its outset has been strongly marked, its remissions are fatally deceptive. In a scrofulous constitution it is sometimes very acute, and rapidly fatal; more generally, however, it is languid and chronic. In other cachectic affections, also, it is, as might be expected, of an asthenic character; in a patient in broken health from visceral disease, in whom severe headache, vertigo, confusion of thought, squinting, convulsion, and coma supervened, the sole anatomical characters were turgid and relaxed vessels, and effusion of serum into the ventricles.

In gouty subjects apoplexy is usually connected with intense vascular excitement in the membranes of the brain; and with effusion of blood in the ventricles, without softening of the medullary substance.

It is unnecessary to remark on the importance of prompt treatment wherever strong premonitory symptoms are instant; it may not, however, be needless to urge attention to the remote causes, as well as to the actual symptoms, as a guide to practice; a strong exciting cause will be followed by a strong disease, although the symptoms do not always manifest its real severity.

The importance of regulating the diet, of promoting the excretions, and of avoiding or removing the ordinary causes of excitement, is well recognised; and in the slighter threatening of the disease it may be sufficient to cut the hair, and to enjoin the use of purgatives and the cold affusion. A close examination of cases, however, will show that oftentimes reliance is placed on these means when the treatment should have been more active. Purgatives and low diet are not always safe substitutes for the abstraction of blood. The first of the cases below described shows that the omission of bleeding in the previous stage may not be repaired by the most vigorous use of later remedies; and, on the other hand, early symptoms that have not yielded to free purging have instantly given way to a single cupping or venesection. General bleeding is preferable in most cases to leeching, and even in weak subjects leeches are inferior to the cupping-glasses. It is necessary, indeed, to remember, that when the brain has long been in a state of congestion, a small bleeding may induce fainting, and in one case it was followed by unexpected death. The operation had therefore better be done in the horizontal posture, and the patient precluded from exertion after it.

Of purgatives, those are preferable which produce watery stools, as elaterium and croton-oil, or jalap and gamboge, with senna and neutral salts. The addition of meadow-saffron vinegar to the black draught adds much to the hydragogue effect, and powerfully relieves the head.

The utility of various means of counter-irritation and revulsion, in averting a threatened attack, is abundantly established; one of the best measures is an issue in the scalp, made by an incision, and stimulated to a free discharge by proper dressings.

The cold affusion, especially the shower-bath, has appeared in high-blooded subjects to excite a dangerous reaction; in some cases cold washing instantly after a sub-tepid lotion has answered better.

When head-symptoms occur in the course of other diseases which persist with the secondary affection, the attention is sometimes fixed on the primary disease, to the neglect of the brain affec-

tion, or a delusive hope is entertained, that the latter, being sympathetic, will subside with the former without any specific treatment.

When the head-disorder has been preceded by pulmonary symptoms, extreme caution is required in the use of narcotics. In such a case, in an adult, I have seen fatal apoplexy after a quarter of a grain of muriate of morphia, given to relieve sleeplessness. In this complication of diseases, also, the inhalation of hot vapour for the bronchial irritation has seemed to favour the comatose attack.

The utmost caution is required, also, in the use of tonics, and of iodine, in strumous subjects, in whom the constitutional debility may seem to be the chief object of practice. In one case of slight but protracted headache and cough, supposed to be connected with weakness, very small doses of the tincture of muriate of iron with laudanum, repeated only for three days, occasioned profound apoplexy. In another case, of disease in the liver, with ascites, head-symptoms, that at first appeared of little moment, passed into a fatal affection—mercury with opium, and wine and porter for the exhaustion consequent on diarrhœa, being persisted in, while the appropriate remedies for the brain-symptoms were postponed. Mischief has also followed an attempt to check a diarrhœa co-existing with headache; in this case opium and digitalis seemed alike injurious; indeed, the latter medicines appear to have been often injurious in head affections—a comatose tendency, which has passed into serous apoplexy, has come on while foxglove was given largely for dropsy: this drug appears to weaken the vessels of the head, so that, on a slight excitement of the circulation, a serious passive congestion is consequent.

Serious consequences have also arisen from regarding head symptoms as merely symptomatic of worms; a view which has obtained a general reception from the fact that alarming nervous symptoms have vanished on using an efficacious *vermifuge*.

Harm has also arisen from trusting to mercury alone, when bleeding and purging should have been premised.

Many experienced practitioners will have seen reason to regret the conse-

quences of being content with merely a mitigation of the premonitory symptoms. It is, indeed, natural to feel unwilling to excite alarm by proposing active measures or disagreeable restriction, when the peremptory necessity for them is not obvious to the patient himself. It will, however, conduce to a more complacent retrospect of one's professional life, to have acted in these brain disorders, at least, on the principle that it is safer to treat slight symptoms by active remedies for a few days, than to allow a serious disease to form itself by an erroneous leniency.

Treatment of Apoplexy in the fit.—It is a most important general principle of the treatment, not to trust to any one remedy, however vigorously employed, but to institute a well-combined system of means. Blood-letting is of course the first remedy: it would often be more efficacious if it were more rapid and extensive. In two of the subsequent cases it was carried to the extent of fifty ounces and upwards, at one time, with the best effect. In one case the veins of both arms were opened together. In another case, when, from severe tonic spasm of the arms, it was impossible to open a vein there, thirty ounces were obtained in a continued stream from the temporal artery. The good effect of free bleeding from extensive incisions in the scalp is to be seen in another of the cases; no leeching could have acted so rapidly and beneficially. To bleed from an artery and vein at the same time, will, in some cases, be good practice; and cupping-glasses on the scalp seem always preferable to leeches.

When a large abstraction of blood has failed to relieve the coma, and when tonic spasms have succeeded, it will be better to abstain from further bleeding in any mode; a second bleeding in such circumstances, even to a small quantity, will sometimes induce convulsions, and bring disgrace on the practitioner; and to bleed at all, after the coma has been followed by involuntary stools and tonic spasms, and a failing pulse, will be fruitless, if not pernicious.

The cold-dash, or a continued stream of cool water on the head, is a most powerful remedy, and is particularly useful in apoplectic puerperal convulsions, and in the convulsions of chil-

dren. When bleeding has failed to carry off the coma, the cold affusion has quickly restored sensation.

A current of cool, or, at least, of fresh air, is nearly of equal importance with the cold affusion.

Purgative clysters should never be omitted; and the decoction of senna with salts is better than turpentine, in the comatose state, while the pulse is high. When the power of swallowing is restored, the croton oil is invaluable; and when merely dropped on the tongue, without being swallowed, it may excite purging. Cooling purgatives should be persisted in as long as the tongue remains white and dry: calomel, with gamboge, and the decoction of senna, with soda and Glauber's salts and tartarized antimony, have been found the best combinations. In some cases, aloe and colocynth have been chiefly trusted to, with an unsatisfactory effect.

Mercury is a most valuable auxiliary to bleeding; it prevents or cures that slow inflammation which is too apt to follow apoplexy. It appears from a careful comparison of cases, that even large bleedings, when mercury has been neglected, have been less successful than less profuse bleeding with mercury. The *bichloride* will often be found more powerful than calomel: it has a stronger and quicker influence on the secretions and excretions, and thus quickly relieves the plethoric state.

Have not Emetics, once a favourite practice, gone too much out of use? It is a common idea that they favour a dangerous congestion of blood in the head: this possible effect has, in my experience, been more than compensated by the consequent depression of vascular action; at least, when the vomiting has ensued from colchicum: and when the immediate exciting cause of the coma is in the stomach, common sense and experience agree in pointing out an emetic. An easy disgorge of the stomach may generally be obtained by a strong infusion of ipecacuanha with soda, which is preferable to giving the powder.

In that somewhat perplexing case, of sudden coma attended with a depression of the vital functions, which might seem to suggest the use of diffusible stimulants, it has been found that cold to the head, and warmth to the feet, is the best cordial; and the

hot bath, so commonly deemed a panacea for the convulsions of children, is not safe in the apoplectic state: a stimulant clyster and a sinapism will be the safest means of promoting reaction.

The continuance of coma after the use of active remedies is naturally a source of anxiety to the attendants; experience shows that the best course in such a case is to drop ether on the head, administer a turpentine or assa-fœtida clyster, to apply stimulant embrocations on the back, and sinapisms on the calves of the legs, and, in the patience of hope, to avoid over-officiousness. In some cases the coma has continued for twelve hours, and then the salutary effects of the remedies have shown themselves.

In apoplexy from narcotic poisons, it is of consequence not to omit remedies for the state of the brain, while one's efforts are directed to evacuate the noxious matter: in poisoning from opium and alcohol, bleeding and the cold stream on the head may be as necessary as the stomach-pump.

[To be continued.]

NOTICE

OF

THE MEDICAL ORGANIZATION, STUDIES, &c. IN ITALY.

By EDWIN LEE, Esq.

(For the *London Medical Gazette*.)

[Continued from p. 443.]

Students—Discipline—Examinations.

THE Archbishop of Seleucia says, in his project of reform, "the celebrated Antonio Canova was indignant at the sight of so great a number of young men brought up to the art of sculpture, saying, that the great number of them obliged to exist upon their own resources could afford no service to the art nor to society. With the same feelings, those persons who have an interest in the prosperity of States, and in the splendour of classical studies, regard the useless multitude which dedicates itself to literary cultivation.

"If it be true that society cannot subsist and develop itself except by favouring literature, it is nevertheless clear that a certain restriction of the number of those who cultivate it ought to be established. Society requires only a given number of philosophers,

physicians, lawyers, &c. because it cannot support all those whom an inconsiderate caprice impels into those different directions. Consequently, individuals on leaving the scientific institutions, (with the exception of a limited number) are exposed to the want of bread; they annoy the governments by repeated solicitation of employment and assistance; but they do so in vain, for it is impossible to meet all the exigencies thus occasioned. In this manner, having from their infancy unadvisedly chosen their profession, they find themselves exposed to pass their days in neglect and misery, dissatisfied with themselves and with others. If to these considerations it be added, that many of them are not adapted to acquire a high reputation, and a position with respect to fortune corresponding to their literary education, it may easily be perceived to what dangers society is continually exposed, and what bad services it may expect from these young men, with scanty knowledge and fortune. Let us hope that when, by means of better regulations, and the progress made in the arts and in industry, the inferior orders will have reason to think themselves happy in their proper position, we shall see arrested the torrent of this mass of writers, who, without vocation, and God knows how, sometimes with negative dispositions, besiege at the present day the portals of the University."

These reflections, made with reference to Italy, will likewise be just when applied to France, inasmuch as that which in Italy is expressed as a means of prevention, is already verified in France by the course of events. The principle of political equality, which is serviceable as a barrier against the pretensions of the old aristocracy, by penetrating into the modes of education, has produced a general change in the classes. With a little Latin and Greek in his head, a little mental activity, with the instances before him of rapid fortunes, the fruits of talent or audacity, each one has thought himself predestined to an exceptional position, and has thrown himself upon the public, seeking everywhere a stepping-stone wherewith to raise himself above the multitude. There is now no restraint as formerly, no direction of the Government since 1830, in conse-

quence of the adoption of the sovereignty of the people as an axiom of public right; no intellectual vocation, because the system of instruction renders every man fit for every thing, and is conducted in such a manner that he is not particularly fitted for anything. There is, then, no reason to be surprised that this overwhelming torrent should break through the defences raised by the authorities, and that it should threaten not only the political constitution, but also the social existence in its more important foundations. It was estimated a few years ago, that of 35,000 pupils in the small seminaries of France, 5000 only were destined for the priesthood. Thus (it was said) there are at least 25,000 individuals (even admitting that many of them were in a certain position with respect to fortune) cast every seven years upon the secular part of society, half-instructed, and ready to encumber the schools of law and medicine, which are their only refuge against starvation, because none of them would return to the plough from whence he was taken.

After these statistical calculations, come epigrams, more or less witty, of lawyers without clients, doctors without patients, masters without scholars; which calculations and epigrams might be translated as follows:—either public instruction is badly distributed, or the students arrive in the faculties with too scanty guarantees for the security of society.

The mode in which all the states of Italy are constituted, with an organization nearly homogeneous, still preserves the difference in the condition of their aristocracy and their agricultural population, which separation is general and well-defined. The middle class, mixed up with the industrial and operative classes, does not present a very marked individuality. The apprehension cannot, therefore, be reasonably entertained of seeing places invaded by those upon whom, in France, power and influence have devolved. Industrial celebrities, artisans raised above their original condition, are rarely met with in Italy. There, liberalism, the faithful expression of moral and rational progress, is concentrated among the lawyers and physicians, but there does not exist below these, as in France, (especially since 1830) a numerous class of eloquent *proletaires*, who have an

interest in exciting revolution; consequently, the admission to the Italian Universities need not be guarded by too many difficulties. With respect to knowledge, the presentation of a diploma of bachelor in philosophy; with respect to morals, a certificate of good conduct from the priest; with respect to means, the deposit of a sum required for five years' study: such are generally the preventive guarantees required from every Italian student.

In some countries, however, more is required. In the Faculties of Piedmont, inquiry is made with respect to the position of the student's family, the means which they possess, and the avocation of the father. The *magistrati della riforma* are likewise enjoined not to admit persons of low extraction, or inferior condition, to the acquisition of academical degrees, unless they have exhibited proof of more than ordinary talent. It may be questioned whether the magistrate has been often obliged to exercise this right of exclusion, because the necessary pecuniary sacrifices required for university studies would mostly suffice to retain in industrial avocations those who might otherwise be tempted to leave them. In order to prove this fact, it will suffice to indicate the number of students in each university, as compared with the population of the different states.

Pavia and Padua, the resorts of students of the Austrian territory, not only as far as the Adriatic, but even to the district to which the influence of Vienna extends, have never exceeded—the former 900, the latter 1800 students; of whom 450 of the one, and 600 of the other, were medical. Besides, there has been a considerable diminution in the number of late years. Padua, especially, has seen the *personel* of its faculty diminish in a most discouraging manner.

The number at Bologna had not exceeded 500 (of whom 150 medical). At Vienna it is restricted to 300 (100 medical and 150 law). Pisa has generally had from 600 to 700 students (about 200 medical). In these two last-named universities the communes of Tuscany maintain 100 students gratuitously.

Students in Italy, once admitted to the University, are free to live in whatever part of the town they please, except at Modena and at Naples. In the former, they all live in an establishment which depends upon the govern-

ment, each paying thirty francs a month for his board and lodging.

At Naples, the government founded, about thirty years ago, a kind of pensionate for 100 students, in order to improve the study of medicine, and at the same time as a means of preserving the youth from the corruptions of the capital. For a moderate annual contribution they receive instruction, board and lodging, are subject to a regular discipline, and are under the direction of the junta of public instruction. Their professors, elected by concours, are regarded as substitutes in the faculty of medicine. They wear an uniform, and are admitted only after an examination in Latin and in literature. Five years are allowed them to take a degree in the medical or surgical profession; at the same time they improve themselves in languages, mathematics, and philosophy.

The administration of this establishment is confided to a special commission, and the instruction to eighteen professors, assisted by six inspectors of the studies. At the expiration of each year the pupils undergo a public examination, under the direction of these latter. Any one may interrogate them, and if they answer successfully they pass to the superior grades, and receive the diploma of the faculty: the most distinguished of them, after five years' study, obtain the *Laureat*, without paying any fees to the University, as a recompense for their conduct. It is, in fact, a kind of polytechnic school of medicine, as a great number of individuals from the Medico-Chirurgical College are destined to supply the public services of the kingdom.

Besides this peculiarity, Naples differs from other cities in Italy and France in the circumstance, that, in addition to the University courses, private instruction has acquired a great development, and the lectures of professors surpass in importance those of the official professors. This liberty of teaching consequently produces a facility in collecting students into particular boarding-houses, which are frequently kept by the professors, or by persons selected or authorised by them. Students are, therefore, not left absolutely to themselves, but they are at liberty to change their master and lodgings whenever they please.

Students in Piedmont provide their

own lodgings, but it must be in a lodging-house approved by their superiors. They are obliged to return home on the approach of night, in order to prevent them from frequently resorting to the theatres, balls, or public amusements. They are likewise prohibited from entering *cafés*, or other places where games of chance are played, under the penalty of losing fifteen or twenty days of their lectures.

The assiduity of attendance is proved by certificates given by the professors every two months; who, moreover, devote one day of the week to directly interrogating them—thus the student cannot escape their vigilance. Every month the student must present a certificate of having confessed himself: this regulation likewise holds good during vacation. He is enjoined to receive the communion at least at Easter, and to attend on Sundays and holidays divine service in the oratory of the University, and in the presence of the professors of each faculty.

Medicine appears to be in a very backward state in the Duchy of Modena, where, according to M. Combes, doctrinal tradition is preserved intact. There, no one is allowed to question the Hippocratical test—a sacred ark which none may touch without sacrilege. The following is an account of a public session, at which M. Combes was present:—

On the 5th of July, 1841, in the capital of this Duchy, which is smaller than many departments of France, the termination of the scholastic year, and the conferring upon ten students the degree of Doctor of Medicine, were celebrated. The meeting was presided over by a priest, who arrived in a carriage, and was received with the greatest distinction, his entrance being announced by noisy music. This was the Grand Chancellor, the head of public instruction. The assembly, though not public, was numerous and solemn; but this scenic demonstration bore a character of gravity and strangeness which, if in France, would require one's ideas to be carried back a hundred years from the present time.

The candidates descended to the gate to receive the Grand Chancellor, clothed in characteristic black robes. When the president had taken his place, the professor who had to deliver the ordinary discourse named the ten candi-

dates, who placed themselves behind him, and facing their judges. The trial of each consisted merely in the oral exposition of a text of Hippocrates; the argumentation was restricted to a question, followed by an answer as short as possible. There was no actual discussion, but in its stead salutations, exaggerated compliments, given and received with an admirable *sang froid*, and which imparted to the ceremony a character of mere external formality. After this trial, if such it can be called, the Chancellor asked the assent of the professors, who gave it unanimously. The law was then read, conferring upon the newly elected the right of practising. The *Promoteur* invested them with the professional insignia, after having made them successively swear, kneeling upon the works of Hippocrates.

Then began the discourse of the before-mentioned orator, who this year was the professor of botany. He spoke in Latin, and at great length; his reasoning seemed to have reference rather to a religious question than to scientific facts. All the eighteenth century and its most illustrious names, Voltaire, Maupertuis, were violently attacked, and accused of materialism, as were likewise the greater part of our modern celebrated men, Geoffroy Saint-Hilaire, Dutrochet, Bory de Saint-Vincent, &c. He fulminated against human pride, the source of that pretension to generalise with which France appeared to be agitated, and he finished with an invocation to the Almighty and Omnipresent God. Except the preamble, it all savoured more of a sermon than a philosophical dissertation, and from the pulpit might have appeared opportune and useful, but on such an occasion as the present it was, at all events, out of season.

The ceremony being concluded, the music again sounded, and the ten new doctors reconducted the Grand Chancellor to his carriage.

How can such a fact ever be reconciled with the events of our epoch? Pure Hippocratism, and a sermon for an academical discourse! how can these strange things take place amidst the medical movement of Europe, even if the science be supposed stationary in some places? Such is the problem which we propose to France, where religion is always supposed to be opposed to science, whose doctrines are

attacked, but whose productions are devoured, even in the little Duchy of Modena.

Homœopathy in Italy.

Homœopathy has long ago been judged in France. Science this time, in accordance with public opinion, has condemned it without appeal. It is dead, absolutely dead, notwithstanding some useless attempts at galvanizing after the blow. Its existence was there most ephemeral; scarcely are any of its proselytes now to be found in Paris, and hardly half a dozen in the provinces.

There are some minds which seem naturally to be seized with a vertigo in the presence of novelty, or of an extraordinary unheard-of fact. Every new thing assumes in their eyes the colour of truth; their good sense succumbs before every thing which is invested with an original character. This disposition depends upon the exaggeration of a legitimate sentiment; for who in the present day is not an advocate for the progress of science; who would dare, for instance, to pretend that medicine has reached its utmost limits? and who would wish to retain it within the bounds of ancient traditions? But wise and prudent men are careful, before entering upon a new path, to watch its direction, and to estimate its solidity. When they give a judgment it is with reserve, and with circumspection. This has appeared to us to be the only rational position to take with respect to homœopathy. After having studied it in its books, its journals; after having assisted at its experimentation at the bed-side of patients, and in hospitals; we concluded by pronouncing that Hahnemann is no more than the missionary of a paradoxical idea, destroyed *à posteriori* by observation, ruined by examination, and of which all the value is reduced to a last blow at the doctrine of Broussais.

Homœopathy made itself a favourable argument in Italy. Of its pretended universal application in France, which was the counterpart of its representations in Paris, where it proclaimed the whole of Italy to be converted to its dogmas; that the sovereigns and populations of the peninsula could not dispense with the help of its new materia medica; and that even teaching was imbued with its principles. In

the presence of such facts, asserted with so much audacity, we deemed it requisite to follow up our former investigations, and to submit the doctrine to a new judgment, inasmuch as we might suppose it to be better appreciated elsewhere than in our own country. But we have had the demonstration of the falsehood of these assertions, which were doubtless unknown to the official propagators of the new German theory.

And, in the first place, what is now to be understood as homœopathy? It is perhaps the sentiment of Hahnemann literally expressed in his writings, free from any amalgamation of the medicine of his opponents, which he so strongly denounces. In fact, in his eyes ancient and modern practitioners represent so many homicides, armed with diplomas sanctioned by the laws, exercising with impunity a fatal profession. Is it that exclusive theory, based upon so minute and difficult a symptomatology, with its infinitesimal and almost impalpable doses, possessing nevertheless a miraculous activity? Or is it this same doctrine modified, more tolerant, less forgetful of the scientific genealogy, of which its adepts remember to have seen formerly some real and efficacious effects; which will neither give up bleeding in apoplexy and in pneumonia, nor sulphate of quinine in large doses in intermittent fevers? The few disciples of Hahnemann in France now adopt these mixed ideas; they believe in this medical *juste-milieu*.

Well, whichever of them be meant, Italy rejects at the same time all these gradations; it neither believes in the genius nor in the wonders of Hahnemann, notwithstanding a natural inclination for all that comes from Germany. At Milan, homœopathy constitutes the practice of two or three Austrian physicians. At Lucca, one of its followers is patronized by the Duke, who, however, likewise keeps near him a very orthodox allopathic physician.

We were for a long time curious to know the opinion of Tommassini, this patriarch of Italian medicine, with regard to homœopathy; and the more especially as they arrive at conclusions diametrically opposed—as far as the poles asunder—the one prescribing infinitesimal doses, and the other enormous quantities of remedial substances,

even in the opinion of French physicians. We therefore took an opportunity of asking the Professor of Parma, what was, in his eyes, the medical value of homœopathy. To this inquiry he first of all stated that the same question had been proposed to him in the same terms, in a meeting of the Royal Academy of Naples, and that he had refused to express his opinion in public, inasmuch as he had made no trials of the doctrine; but that at a later period, after having made it the subject of serious examination, he had frankly expressed himself in a discourse to his pupils, while residing at Bologna.

"I do not conceive," said he, "that a method sometimes innocent, but often dangerous, can be adopted. I can understand that, in chronic diseases, in complaints where the beginning of a new treatment can be postponed to the following spring, in which one amuses the patient instead of subjecting him to a curative method, homœopathy is exempt from serious inconveniences—as, for instance, in asthma and other diseases of the same nature; but it does not do in this manner when acute affections are under consideration—pneumonia, enteritis, or when an organ is threatened with gangrene, in which, from Hippocrates down to the present day, energetic remedies have been with reason recommended—bleeding, leeches, purgatives, &c. I would then mistrust a doctrine which has no regular origin, and refuses all paternity."

If any thing more were required to corroborate so explicit a condemnation, we would add that the Italian youth, so animated, ardent, and eager after fresh knowledge, and withal liberal enough not to receive without examination opinions already formed, to whom both the present and future belong, without being burthened with doctrines and practices more or less ancient, did not receive the doctrine of Hahnemann in a more favourable manner than others. We have seen many students and many young professors, but have not known one who had declared himself his follower.

The population also disdained the numerous benefits which it was pretended they would enjoy, and homœopathy was not in this respect more successful in the peninsula than in France. Its course may be likened to that of the practice which thought to ascertain all

diseases by means of an inspection of the urine—and to that of all universal panaceas which appear, and die upon being subjected to trial, as for instance, the hydro-sudopathy, to which a premature end may be predicted. Nevertheless, it must be confessed, that Hahnemann's theory rests upon a more dogmatical principle, perhaps, because its author lived a long time in Germany, a land so erudite, so abounding in synthetical ideas, and evidently for the reason that it arises from the vitalist theory, which is the daughter of the Stahlian *animism*. On the other hand, we must not forget, that for its part it was fortunate in its criticisms directed against the anatomopathologists, whose material conceptions were concentrated to so circumscribed and exclusive a point of view.

In order to omit nothing that may tend to elevate the progressive element of homœopathy, it must likewise be affirmed that by its means allopathy has been brought again to the study of the moral part of man; which study has been much neglected since the close of the eighteenth century. Nevertheless, the medicine of the mind is no less important than that of the body; or, to express the idea better, science should never separate the one from the other in their reciprocal and harmonical relations.

In conclusion, homœopathy has neither been able to introduce itself in Italy, in instruction, nor among the true public (by which is meant the most numerous class): accident cast it, in the first instance, into the centre of some courts. Some princes have favoured it, from the singularity of its practices; but it is a remarkable circumstance, that in a country where the heads of the society are held in immense estimation, it has scarcely been able to make a single proselyte, and its power of propagation has been extinguished by a universal indifference.

At the present time one must search in the recesses of some salons, in order to meet here and there a disciple of Hahnemann. Most frequently they introduce themselves in the wake of an exceptional and extraordinary cure. For us, who are accustomed to believe in the remedial powers of nature, we will not deny the greater part of the facts thus loudly proclaimed, but we will reserve to ourselves the right of interpreting them to those who have learnt by ob-

servation and study, that which science would lead them to conclude from their investigation. All these men, professors and practitioners, ascribe them to regimen, and the conservative power of the living economy: both of which were perfectly recognized by the ancients, those reasonable and enlightened advocates of the *medicine expectante*.

Conclusion.—Homœopathy still exists in Italy, but it is declining and about to disappear: it has neither professorship nor cliniques. Once the ward of an hospital was confided to it at Naples*, but it lost it for reasons of impotency well and duly verified. Reduced at the present moment to the treatment of some chronic diseases, which do not require active means, its hopes rest entirely upon the prepossessions, the prejudices or the caprices, of persons but little capable of judging it.

THE RELATIONS OF THE PHYSICIAN.

(FROM THE GERMAN OF PROFESSOR
HUFELAND.)

[Concluded from p. 485.]

C. Relation to Colleagues.

THE^r relation is two-fold. The first embraces mutual respect, and where that is not possible, let indulgence at least be the principal law of conduct.

Nothing is more difficult than to judge others, but nowhere is it more so than in the practice of medicine. It is therefore unpardonable in the public; but it is revolting to hear physicians, who know the difficulties of the art, and of forming opinions regarding it, judge their colleagues with severity, harshness, contempt; or disclose their faults, and try to raise themselves by lowering others. Oh, that I were able to impress the minds of my brethren with the truism, as forcibly as I am penetrated by it! He who degrades a colleague, degrades himself and his art. For, in the first place, the more the public becomes acquainted with faults of physicians, the more

will physicians become exposed as contemptible and suspicious, and the more will such exposure impair confidence; and confidence in the whole body being diminished, every single one, and the censurers included, will lose a share of it. The public would be less prone to censure the medical profession, and its faults would not be a favourite topic of conversation, if the members themselves did not broach it, and set the bad example. It shows a short-sighted selfishness, and want of all common spirit, when a physician acts in such a manner, and thereby hopes to raise himself, as he degrades others. Further, such conduct is in opposition to the first principles of morals and religion, which command us not to lay bare the faults of others, but to overlook and excuse them; such a character will be more lowered, in the esteem of sensible men, than he whom he endeavoured to degrade; for the detracted loses only as an artist, while he loses as a man; and a bad action is esteemed worse than a bad medical treatment. Finally, they should reflect, that the same measure they apply to others is applied to themselves. He who treats others in a harsh and haughty manner, may rest assured he will be dealt with in the same manner; which is but justice. Modesty in conduct and judgment behoves every one—most of all, a young physician: it will procure him friends, and opportunities for instruction, and promote his eternal interests, as well as his internal improvement. The medical art is still far from that degree of perfection and certainty which would enable us to pronounce sentence on all methods of curing diseases; we do not yet possess a legitimate universal code; every one is still at liberty to form his own views about the human system, and its treatment, provided they are not against reason and experience. Nobody will deny that cures may be effected in quite different ways, and that the apparent contradictions in treatment may dissolve into unity by the various operations of the organism; organic nature is not confined within such narrow limits as are our systems; if it were so, one after the other would not have had its ascendancy, and been applied with success. After all, our experience, and the results rightly derived therefrom, are the only true and

* The account of the trials in the Parisian and Neapolitan hospitals, as also of those instituted in Russia by order of Government, may be seen in a pamphlet (Homœopathy, with notes illustrative of the Influence of the Mind on the Body, 3d Edition), which was the first notice of the subject published in England, and was originally appended to my "Observations on the Continental Medical Institutions and Practice."

constant rules to be followed in medicine; and the longer, and the more sagaciously, a physician has observed the operation of the living organism against the influence of medicaments, the more he has learnt to appreciate the power of the latter, and to use them with adroitness—the more perfect physician he has become. Let every one, therefore, have his own system, his own view of things; let especially the young practitioner feel happy to possess the newest and most finished theory, and to be able to deduct all according to the rules of the school. But none must believe that he is alone in possession of truth; he must respect the opinion of other physicians, particularly of old ones, matured in experience; and he must often admonish himself that he, who believes himself sage, is only on the threshold of art, and that to doubt, and to search for that which is unknown to us, is the surest sign, and, at the same time, the only means, of proficiency. Moreover, it is an axiom in medicine, that the most trifling circumstance is capable of altering the state of things, and their signification, and it is utterly impossible to judge of the medical treatment of another, unless one has himself been present, and has been informed of all the particulars. It consequently follows, that it is always indicative of a deficiency of mind, or of knowledge, or of malignity and bad conscience, in a physician to speak ill of his colleagues, and it behoves the honest practitioner, when he is asked his opinion, to excuse himself from giving it, by saying, that it is impossible to judge in medicine without a most accurate knowledge of the case; or if this is not practicable, to give explanations favourable to his professional brother, which is not a difficult thing to do: thus he will ever respect himself and his profession. As to the second point, the relation of colleagues to the sick, consultation is first to be discussed. In general, the use of consultations, especially when they are numerous, is very problematical. When opinions are alike, consultation is of no avail; when they are diverse, confusion and disorder in the treatment is likely to ensue. It too easily happens that passions and personal feelings get mixed up in a consultation; and what is still worse, a regard for the sick,

and a desire of cure, are but too readily divided and diminished, even in a well-disposed physician, by the interference of plurality. But there may be cases in which consultations are useful, yea unavoidable; as when a disease is very complicated and obstinate, and the physician grows uncertain in his view and his course; when the patient hesitates, and loses confidence in him; when there is great responsibility attached to the treatment, or there intervenes the feeling of a relative, in which we dare not trust ourselves. However, in order that a consultation may prove really useful, the following conditions must be complied with. The consultations must not be numerous, two at most; three physicians are sufficient, and they must not be decided enemies of each other, obstinate partisans of different sects, but be ripened by mature experience, and have a talent to understand, and to enter into, the ideas of others. Their office is principally to discover the di gnostic causes and character of the disease, and then the mode of cure to be pursued. The execution and guidance of a cure, however, must not devolve on a committee, but only on one, the physician in ordinary. The great principle to be observed by every consulting physician must however always remain thus; namely, to have in view nothing but the welfare of the patient, and to that end he must entirely sacrifice his personal feeling, in order that all his powers may unite for a common purpose. If physicians, in their consultations, would be penetrated by this simple sentiment, there never would be altercations, scandalous scenes, and misunderstandings; and consultations would always prove beneficial to the patient. But, on the contrary, physicians often seem to assemble only to show their reciprocal importance, and to discredit the treatment of the ordinary; and instead of harmonising together, to sustain their individual opinions.

Should one be prepossessed of a favourite idea, or of a favourite remedy, the other ought to yield willingly, if there is nothing injurious to the patient in it; to do so will make it apparent that we are not led by caprice, and the more complaisance may we expect in return in the main matter. But should it happen that the opinions and the

plan of treatment can by no means be agreed on, there is no other expedient left, but an appeal to the decision of the patient. He must declare to whom his confidence leans, and the plan of this one must be prosecuted. Nothing is worse than the habit of some patients to consult clandestinely other physicians, besides the physician in ordinary; and nothing is more reproachable than the habit of some physicians to yield to such demands, even to profit by them, to raise suspicions against the ordinary, and to procure admittance for themselves. No honest professional man can act so base a part; he will rebut such a demand, and insinuate to its authors how indiscreet and impossible it is to judge, and to give advice, without consulting the physician in ordinary, and without knowing the plan of cure which he pursues. No one must think that there is no harm in giving a general opinion on a disease and a cure. Such utterances, made without the least bad intention, tend to raise doubts and suspicions in the mind of the sick, and create difficulties and disagreeable embarrassment for the ordinary physician. But should he be convinced that the sick is falsely treated, salvation of the patient being the supreme end of the healing art, regardless of all political and collegial considerations, it must prevail. This end must be attained, and in cases of urgent danger he must immediately do what conscience and duty advise, without farther reference. No physician of a reasonable mind can find fault with such a proceeding. But, on the contrary, when the case is not urgent, he must either propose a consultation, or if the patient will not agree to this, he must clandestinely suggest to the physician in ordinary what kind of treatment would be better according to his opinion. Thus he can comply simultaneously with the obligations towards the sick as well as his colleague, and relieve the one without injuring the other. But when the sick has entirely lost confidence in his physician, and he is resolved to give himself up to the care of another, the latter dare not and cannot refuse to comply, nor can the other take it ill; for the confidence of a man rests with himself, and it is to be respected. Each one must, however, proceed with that frankness and forbearance which be-

comes well-educated gentlemen. When a sick person passes from one physician to another, it is very common, in order to excuse this step, that he speaks ill of the former physician, right or wrong, and alas! it is the policy of the common practitioners to countenance this conduct, and to find the treatment hitherto used erroneous. But it is not so with the honest professional man. He is aware that such conduct is ungenerous towards his colleague, and cruel towards the patient, who will certainly feel double grief, on becoming convinced, that he has lost, not only time and pain, but that his disease has become perhaps worse, and incurable. I cannot conceive how it is possible for a man of sense and feeling to embitter the last days of a sufferer's life by such declaration. Consequently, the treatment hitherto pursued, is to be approved, if not as a matter of politeness, at least in pity for the patient; the doubts of the patient are to be appeased, and the want of success in the treatment attributed to other causes.

SOME OBSERVATIONS
ON THE
MEDICAL TOPOGRAPHY, CLIMATE,
AND DISEASES, OF THE BIGHTS
OF BENIN AND BIAFRA,
WEST COAST OF AFRICA.

BY W. F. DANIELL,
Member of the Royal College of Surgeons of
England, &c.

[Continued from p. 517.]

CAPE St. Paul's is the western extremity of the Bight of Benin, and the commencement of the Slave Coast. It is situated in $5^{\circ} 45' N.$ Lat., and $1^{\circ} 52' 18'' E.$ Long. With the exception of some insignificant elevations in the neighbourhood of Gugligou, Pulley, Whydah, Porto Novo, and Badagry, the characteristic features of the shores are their excessive lowness. They preserve here the same dull and unvarying outline of one vast alluvial and densely wooded forest, extending over an area of at least one hundred thousand square miles, partially irrigated by the Atlantic tides, and intersected by numerous rivers and creeks, whose muddy banks are unceasingly overflowed. At the distance of several miles from the coast, the peculiar odour arising from swampy

exhalations, and the decomposition of vegetable matter, is very perceptible, and sometimes even offensive. The water also is frequently of a dirty hue, with leaves, branches, and other vegetable debris floating on the surface, brought down from the interior by innumerable narrow channels, that empty their turbid streams into the open ocean. The beautiful and undulating scenery of the Gold Coast may be said to terminate at the Rio Volta, eighteen miles beyond Cape St. Paul's, and is succeeded by the unattractive alteration just noticed. In approaching the land from the westward, the soundings throughout the Bight, which are from four to six miles from the beach, gradually shoal from ten to seven fathoms. In the 18th century the settlements on this coast were deemed of the highest value, and were perhaps founded at an earlier period than most others in West Africa, on account of their eligible position and other convenient facilities for the procurement of slave cargoes. This inhuman traffic still flourishes in many of the ports, although of late it has much decreased, being partly suppressed by the vigilance of our men-of-war.

The first commercial establishment in these regions is the fort of Quitta, formerly belonging to the Danish Government, but now abandoned. It has a commanding appearance, with an exterior of dazzling whiteness, as if recently whitewashed, and is surrounded by a quantity of low brushwood, partly cleared away in front. This fortress is included within the limits of the kingdom of Kerraray, and lies about thirteen miles to the eastward of St. Paul's, being erected on a strip of ground between the sea and a salt lake inland, which communicates with the Cradoo Lake by means of a small river (West Lagos), running parallel with the coast. It is now but seldom frequented, other towns located to leeward possessing superior claims to the attention of the trader, with a more enlarged field for speculation. Acquijah and Paurey are two villages distant nine and sixteen miles to the north-east of this settlement. Forty miles from Quitta is the town of Little Popoe, founded close to the water's edge, and where the Dutch had originally a colony. The landing is very difficult of attainment, especially in the rainy

season, owing to the tremendous surf. From these untoward circumstances its position is necessarily damp and unhealthy. The intervening shore between these places is singularly tame and flat, and presents only a few scattered villages that occasionally peep forth from amid a profusion of sombre foliage. In the vicinity of Gugligou, the last of them, four hills adjoin the strand, and are the only local attractions that enliven the dreary waste of wood and water for a long succession of leagues. Twenty-four miles to the eastward of Little Popoe is Great Popoe, preceded by a very low and marshy country, scarcely above the level of the ocean.

This town a few years since was a great emporium for the sale of slaves, from which some thousands were annually exported, chiefly obtained from Dahomey and the adjacent kingdoms. It is situate near the entrance of a small river, that flows from the lake above mentioned, and is unnavigable by vessels of even a moderate tonnage, in consequence of the accumulation of mud and sand that forms an impassable bar. The Portuguese, English, and Dutch, formerly possessed factories here. The natives are a mild, industrious, and quiet people, mostly engaged in trade and agriculture. These towns are not unfrequently confounded one with the other under the vague term of Popoe. A similar description will apply to the land from this port to Whydah, a space of sixteen miles, a slight elevation a short distance from the latter alone interrupting its regularity.

Griwhe, Grewhe, or Whydah, is in 6° 19' N. Lat., and 2° 5' E. Long., and is at present the principal sea-port town of Dahomey to which European traders resort, being the main outlet to the fertile and productive district of the same name. The appearance of the country in the vicinity of the town resembles the American prairies or savannahs, and like them is low, flat, with occasional knolly elevations. The soil, dark and loamy, is clothed with lank grass and wooded islets, which are well stocked with deer and game. Its climate has been supposed to be more congenial to the constitutions of *unacclimated* than most of the localities in this Bight; but it is, in point of salubrity, incomparably inferior to our

possessions on the Gold Coast. Prior to 1727 it was an independent state, in which year it was invaded and overcome by the warlike sovereign of Dahomey, Guadjá Trudo. Since then it has, in conjunction with Ardrah, become annexed to the extensive provinces of that spacious empire. The succulent and sweet-flavoured tropical fruits may be procured in all these towns in greater or less abundance, but more particularly in their surrounding territories. Pine-apples, oranges, guavas, limes, melons, bananas, &c. grow in wanton exuberance in the environs of Whydah, and would tempt the palate of the most fastidious by their exquisite fragrance. Among the plants indigenous to Whydah may be mentioned the *Saccharum officinale* (sugar cane), *Ocymum basilicum* (common basil), *Amomum Grana Paradisi* (Malagetta pepper), *Parinarium excelsum* (African plum), *Panicum miliaceum* (millet), *Lycopersicum solanum* (love apple), *Indigofera tinctoria* (common indigo),* &c. The soil of the interior is a rich argillaceous clay, of a reddish tint, intermixed with siliceous particles. The West African Company had latterly a fort at this place, but it is now abandoned and in ruins.

Porto Novo, the sea-port of the kingdom of Ardrah, is thirty miles from Whydah. The minor towns Appee and Jackin, the former three or four miles inland, and a solitary hill (Mt. P. Iayer), near the latter, are the only objects worthy of note, the intermediate coast still affording the same monotonous aspect. The capital of this territory is also termed Ardrah, and is built on the banks of a small river, that unites with another running into the Cradoo Lake.

* There are several species of the *Indigofera* employed by the natives, not only for their medicinal properties, but also for the purposes of dyeing. Those commonly administered by the native practitioners for the cure of diseases, are the *I. tinctoria*, *I. birsuta*, and *I. euncaphylla*, &c.; but it is often difficult to determine the correct species from the mutilated specimens that are submitted for examination. The Eboes appear to use the *Indigofera euncaphylla*, abundantly found in the interior, which they term *Né* (probably a corruption of the Arabic word *N. e'*) in enteric affections, and as a vermifuge. According to Forskal, the *I. tinctoria* is much resorted to in Northern Africa for its anthelmintic powers. In his *Flora Egyptiæ Arabica*, he states it to be the *Nile* of the Arabs, and that it is exhibited "*semina cum oleo sesami et sale ammoniac mixta mane assumpta, Tania ex-pellunt. Diæta erit: aqua per triduum abstinere, alium cibum non edere, nisi panem, potus coicæ permittetur.*"—Page 138.

It enjoys a population of above eight thousand, who are a well-formed, active, and enterprising race. I may here remark, that the nomenclature of several towns, not only on this, but also on the Gold Coast, has been evidently derived from an oriental source. Ardrah, with one or two other towns, may be satisfactorily cited as the most obvious examples.

Badagry is a moderate-sized town, with a population of ten thousand. It is situate three miles from the shore, on the western branch of the river Lagos, twelve miles to the eastward of Porto Novo, and is not much resorted to, unless by the Portuguese and French. A second hill (Mt. Badagry) may be observed near it. A sandy strip of land, covered with a thick sward of grass, intervenes between it and the beach; and the suburban buildings are partially concealed by young thickets of evergreen shrubs. A Wesleyan missionary school has been recently established here, for the education and conversion of the natives, under the control of the Rev. T. Freeman, the indefatigable superintendent of the missions at Cape Coast Castle, &c. When the slave trade was at its zenith, the Portuguese erected no less than five factories at this place, and the sale of human beings was carried on to an almost incredible amount. The upper layer of the soil in the circumjacent country has been stated to consist of sand, incorporated more or less with a reddish marl, on which it is usually based.

The unfortunate Capt. Clapperton with Richard Lander, set out for Sakatoo from this town in December 1825, and the brothers Lander followed this track in 1830, in their first expedition into the interior. The sovereign of Badagry professes allegiance to that of Eyeo or Katunga, a metropolitan town lying some distance beyond the eastern range of the Kong mountains. After passing a low thickly wooded shore to the extent of thirty-six miles, studded by a continual succession of picturesque villages, the river and port of Lagos successively engage our attention. The river Lagos, but three quarters of a mile in width, forms the estuary of the Cradoo Lake, and from its shallowness is perfectly inaccessible to craft of any burthen. It is divided into two diverging streams, named

East and West Lagos, the former running parallel with the shore from three to four miles distant, flows into the Rio Formosa; the other merges in a large expanse of water near Whydah. Adjoining its embouchure, situated in 6° 24' N. Lat. and 3° 22' E. Long. is a small island, on the northern extremity of which the town of Lagos is founded. This place enjoys a lucrative commercial intercourse with the circumjacent countries by various creeks, whose tortuous branches meander in every direction, particularly towards Dahomey and Benin, which are from sixty to ninety miles to the eastward of it.

The diseases of the inhabitants of the Slave-coast differ but little from those observed in the numerous rivers of the Bights more to the southward. In the prædial and elevated inland districts they are less prevalent than in the maritime towns and villages, and moreover are not characterized by that asthenic type which accompanies those morbid affections that occur in the latter localities*. In Yaniba, Benin, and a few of the neighbouring kingdoms, circumcision is performed on both male and female very early in infancy. Mr. Dalzell states, that this operation "is universally practised among the Dahomian subjects, but not at such an early age as among the Jews; the time of submitting to the operation being left to the boys themselves." A very curious custom, mentioned by this author, still exists among the younger females: "Prolongatio videlicet artificialis laborum pudendi, mammæ papillæ simillima."†

Cradoo Lake is about fifty miles in length, and from four to seven in breadth. Several tributary streams empty their waters into it, after wandering through a series of fertile districts, and serve as the most easy medium for the conveyance of the native merchandise from one remote market to another. Its banks are covered by numberless flourishing villages, the inhabitants of which are solely devoted to agricultural and mercantile pursuits. Cradoo, the capital of these populous regions, lies in the Jaboo country, thirty six miles from the outlet of the lake. Lake

most trading depôts in this Bight, the human species still remains one of the staple commodities of barter. The soil of the interior is light and sandy, and when denuded of its heavy timber and underwood is richly productive.

Thirty miles to the eastward of Lagos is the petty village of Palma, and twenty-one miles to the eastward of it is the town of Oady or Oddy, beyond which detached clusters of mud habitations are occasionally perceptible, located on the verge of the sandy beach, and mostly concealed by the foliage of the adjacent woods. The general aspect of the coast from this portion to the Rio Formosa, a distance of thirty miles further to leeward, resembles the regions previously described, and is equally insalubrious.

CASE OF MALIGNANT OR HÆMORRHAGIC SMALL-POX.

By JOHN SNOW, M.D. London.

Fellow of the Royal Medical and Chir. Society.

(For the London Medical Gazette.)

THE following case from my note-book, of a form of small-pox which, I believe, is happily now very rare, is, I think, not devoid of interest; and will be still less so, if examined in conjunction with the "Case of Purpura Hæmorrhagica, probably arising from variolous contagion, by N. Adams, Esq." in the last number of the MEDICAL GAZETTE, which occurred in the country nearly at the same time as my case, and which resembles it in several particulars.

I was called at 7 o'clock, on the morning of Saturday the 8th of June last, to a boy named Cannell, living at No. 2, Chapel Place, Crown Street, Soho. He was a fine stout boy, seven years of age, but had been affected with asthma from his birth. His brother, aged 5, was labouring under small-pox in the same room; they were of the distinct kind, and in the maturative stage. Neither of the children had been vaccinated. The subject of this case took ill on the Thursday morning previous to my seeing him, with pain in the back, and fever. On the evening before my visit, an eruption appeared on the skin, and he became delirious; afterwards he had bleeding from the nose. He

* Fetish and other superstitious ceremonies constitute the remedial treatment employed by the native doctors.

† History of Dahomey, 1793. Introduction, page xviii.

was delirious all the night, and was insensible of what was said to him, and vomited a liquid mixed with blood. I found him in a muttering delirium, incapable of being roused, although he resisted any attempt to give him drink. He was vomiting almost constantly small quantities of blood, and of a thinner liquid, apparently serum, tinged with blood. The face and neck were swollen, and of a purple colour—were occupied, in fact, with one large vibex. There were other vibices on the body, and the rest of the trunk and extremities was spotted with numerous petechiæ, many of which had a lightish coloured spot in the centre, and appeared like pimples till they were touched, but there were only a very few on the trunk which could be felt to be a little elevated. The skin was hot, and the pulse frequent, small, and feeble; the tongue was coated with a brown fur, and the rest of the interior of the mouth was of a bluish white colour; he had passed motions in bed; cold applications were directed to the scalp denuded of hair, and sinapisms to the legs.

He was visited again in three hours; the vomiting of blood continued; the breathing was stertorous, and the pulse almost imperceptible. He died in half an hour more.

I made an examination of the body eleven hours after death, with the assistance of my friend Mr. Marshall, of Greek Street. The vibices and petechiæ remained as before; the scalp was very vascular, and blood flowed from it when cut; the veins on the surface of the brain were much distended, and the pia mater dipping in between the convolutions was much engorged, and there were little spots of extravasated blood in this situation. The red dots were found to be rather more numerous and large than natural on slicing the brain; there were one or two drachms of clear serum in each lateral ventricle, a little in each of the other ventricles, and a drachm or two at the base of the brain; the lungs were extensively emphysematous, they did not collapse on the chest being opened, but, on the contrary, rather bulged out, and many of the lobules were paler and more prominent than the rest. This emphysema of the air cells was most extensive at the lower part of the lungs; there were a few

partial adhesions of the pleuræ, and the lungs were engorged with blood, as were the right cavities of the heart, which was healthy. The stomach contained a little bloody liquid, and all over its inner surface were dark purple spots averaging about the size of a pea, and situated about half an inch apart. They proved to be small portions of blood extravasated beneath the mucous membrane; this condition did not extend to the intestines. The fæces in the small intestines were of a very dark colour, most likely from the presence of blood. The bladder was empty, and the viscera not mentioned were in the normal condition.

The row of small dwellings, in one of which this boy lived, are damp and ill ventilated, and all the illness I have seen in them has been more severe and intractable than in the rest of the neighbourhood. I have treated two cases of sporadic cholera there, as bad as any cases of the epidemic disease which I have known to end in recovery; and one case of purpura hæmorrhagica with inflammatory symptoms in a child about five years of age, which I understand did not recover from the illness.

Frith Street, Soho Square,
Jan. 22, 1845.

ANALYSES AND NOTICES OF BOOKS.

“L’auteur se tue à allonger ce que le lecteur se tue à abréger.”—D’ALEMBERT.

The Anatomy of the Arteries of the Human Body, with its applications to Pathology and Operative Surgery, in lithographic drawings; with practical commentaries. By RICHARD QUAIN, F.R.S. Professor of Anatomy in University College, and Surgeon to University College Hospital. The delineations by JOSEPH MACLISE, Esq. Surgeon. Part xvii. London: Taylor and Walton.

WE congratulate Prof. Quain on the completion of this very excellent and beautiful work; a work justly deserving a place in the library of every surgeon conscientiously devoted to the duties of his profession. The delineations are no less distinguished for fidelity of detail than artistic effect. The part before us comprises seven plates; six refer to the arteries of the leg and foot; the remaining plate illustrates the

ordinary disposition of the arteries of the brain and spinal cord, and some peculiarities of the former.

The author, impressed with a belief that the difficulties which have often occurred in the performance of those surgical operations in which the larger arteries are concerned, have arisen in great part from want of sufficient acquaintance with the differences in anatomical disposition to which these vessels are liable, not merely as regards the deviations in the origin of large branches, but other peculiarities affecting the length, position, or direction of the vessels, was led to a minute study of the subject. With this view the bodies which were received during a series of years for the study of anatomy into the School of Medicine in University College, were examined with more or less attention.

"These bodies, to the number of 1040, were, with rare exceptions, so inspected with reference to the subject of my inquiries, that anything very unusual could not escape notice; and, in order to insure accuracy, when other occupations allowed, the arteries were carefully examined and their condition noted at the time,—attention being always particularly directed to those vessels and to the points in their history which seemed to be of importance in the practice of surgery.

"This detailed investigation was continued until the number of cases observed appeared such as would afford grounds for fixing what should be considered the most frequent or standard conformation of the vessels, and for forming at the same time reasonable conclusions both as to the limits of the deviations from that standard and the relative frequency of their occurrence.

"While the observations thus made were written down, drawings were obtained of all the important peculiarities which presented themselves, and when it was practicable the preparations were preserved.

"The varieties in the arrangement of the blood-vessels thus noted grew, as may be supposed, to be very numerous; but instead of difficulties multiplying with the number of observations, it was usually found that as the facts accumulated, the transition

from one state to a very different one ceased to be abrupt or without method, for others from time to time interposed which served to link them together."

These observations the author intended originally for the benefit of his class, but as their number and connexion seemed likely to render them more extensively useful, he very wisely resolved to publish them.

It was found, however, that their utility would be very limited, unless a full history of the arteries, with adequate delineations, were annexed. Accordingly in the present work the arteries are depicted as follows:—

"1st According to their most frequent arrangement, without the accompanying veins. 2ndly. They are shown in connection with the larger veins and the nerves. 3rdly. The deviations from that which has been taken as the standard because the most frequent condition of the arteries, are illustrated in a series of sketches. 4thly. Such peculiarities of the veins, and occasionally of the nerves and muscles, as appeared likely to be of importance in surgical operations, are represented on a reduced scale.

"The letter-press, besides an explanation of the drawings and remarks on them, contains—A Series of Tables, showing, in a considerable number of cases, the condition of the arteries as to some of the points of most importance in their anatomy. A connected view of their anatomical history,—the details being arranged in systematic order. And Practical Commentaries: which consist, for the most part, of inferences from the facts previously set forth, and their application in performing surgical operations."

A Thermometrical Table on the Scales of Fahrenheit, Centigrade, and Réaumur. By ALFRED S. TAYLOR, Lecturer on Chemistry, &c., in Guy's Hospital.

WE think the profession very much indebted to Mr. Taylor for this most useful table. It is designed to obviate the necessity for those perplexing calculations so often rendered necessary by the employment of different methods of graduation in England and on the Continent. It ranges from 13° to 374° Fahrenheit, from -11° to +190° Centigrade, and from -9° to +152° Réaumur; arrange

which comprises all the most remarkable phenomena connected with heat. The facts connected with temperature, placed on the scale, relate to Climatology, Physical Geography, Chemistry, and Physiology. In compiling this table, which has occupied the occasional leisure of four years, Mr. Taylor has invariably acted upon the principle of selecting the best authorities. Many of the facts he was enabled to collect or verify by personal observation, and some of the chemical phenomena have been derived from direct experiment.

The Medical Guide and Almanac for
1845.

THIS comprehends the latest regulations of all the licensing medical corporations, with a list of their officers, the metropolitan and provincial schools and hospitals, and the universities and medical schools of France and Germany. It may be regarded as a very useful book of reference for young men commencing their studies, for those about to enter the public service, or for those who intend to resort to the continent in quest of further knowledge.

MEDICAL GAZETTE.

Friday, January 31, 1845.

"Licet omnibus, licet etiam mihi, dignitatem
Artis Medice tueri; potestas modo veniendi in
publicum sit, dicendi periculum non recuso."

CICERO.

THE REMEDIES PROPOSED.

WHILE all parties seem convinced that it is high time an improved system be adopted for the regulation of the medical profession throughout the United Kingdom, a want of unanimity prevails as to how that may be best accomplished. One party contend for the supremacy of the Royal Colleges, for allowing quackery of all sorts to remain unmolested, and for letting the Bill pass in its present form. Another party object to certain enactments in the Bill, but evince a sense of gratitude

to Sir James Graham for its introduction into Parliament. They approve, for example, under certain modifications, of the proposed Council of Health and Medical Education; of a public annual registration of all qualified members of the profession, provided that be rendered compulsory. They urge, however, the expedience of a summary process of punishment for individuals who shall falsely pretend they are registered, or assume any name or title whatsoever, implying that they are practitioners in medicine or surgery; they might also add obstetrics. A third party, on the other hand, maintain that the Bill is not calculated to benefit either the public or the profession, and demand its total withdrawal. They entertain the opinion, that nothing short of incorporation of their body will be of any avail; and this they regard as constituting the sole and indispensable measure of reform. Establish us by Royal Charter, say the latter—give us an independent College of our own—and we shall be satisfied; not otherwise. Under this new *régime* the existing Colleges of Physicians and Surgeons would, it is supposed, be ere long eclipsed, and swept away as useless incumbrances. How, indeed, could these institutions be expected to survive in the presence of a University embodying nineteenth-twentieths of the medical practitioners of the realm?

We have been led to form the tripartite division above mentioned, from a very attentive perusal of the various documents that have lately appeared. From all we can learn, what might be termed the moderate party, or that classed under the second head, embraces a very considerable proportion of the leading medical men throughout the provinces.

With them we heartily concur as to

the urgent necessity for making the laws more stringent, and more easily available, against all unqualified and uneducated persons practising in any branch of the healing art. Indeed, we formerly expressed an opinion that if the restrictive clause in the draft of the bill now before parliament were somewhat extended and more distinctly defined, the object would be attained.* The pernicious consequences of the no-restriction system are amply demonstrated in the American States of the North. In the city of New York, for instance, where any shoe-black may arrogate the title and functions of a doctor of physic, things have come to such a pass, that scarcely a practitioner of honourable feeling is found willing to enter the lists with the disgraceful competitors he must needs encounter. There, of a truth, the profession is in a most degraded condition. In fact, with the exception of some four or five physicians of established reputation, a great proportion of the practitioners of that populous place are ignorant and boastful pretenders, alike guiltless of education and of principle. We have been informed by an intelligent eyewitness, that the sittings of its Medical Society more resembled a bear-garden than a convention of members of a liberal art. The ordinary qualification to ensure practice among the mass of the community is to establish an apothecary's shop in some frequented street, and then to puff off a nostrum or two. By the help of such appliances impudence and effrontery rarely fail to succeed in gaining the credulity of the public, and ousting the regular practitioner. We are told that an empiric of this stamp realized a larger fortune than ever fell to the lot of any member of the faculty in that city. As a natural result of so debased a state of things, the adultera-

tion of drugs is carried on to an unbounded extent. Every article in the materia medica of any value is notoriously sophisticated.* In the southern states of the union, namely, Carolina, Georgia, and Louisiana, where some collegiate control exists, the profession is, we believe, altogether on a better footing.

Let us now turn from "a republic unequalled in the annals of the world for the freedom of its institutions"† to one where the spirit of liberty is not permitted to soar on such eagle pinions, though situate within the same hemisphere—we allude to Mexico. In its capital, made up of gorgeous palaces, and mud-built hovels, containing a population of 180,000 souls, irregular practice is unknown, and little or no encouragement is given to the sale of quack medicines. No one is allowed to officiate in the treatment of disease who has not previously passed a rigorous examination of four or five days' duration by the professors of the University. A Board of Health, the *Cuerpo de Sanidad*, composed of able men, presided over by a minister of state, forms the head of a medical police for the kingdom. Its duties are clearly defined. It takes care that no individual shall exercise the vocation of a physician, surgeon, or accoucheur who is not duly qualified and *registered*. The chemist (*boticario*), whose duty is confined to the preparing, compounding, and dispensing of physic, is also compelled to undergo an examination before he can obtain the requisite license for carrying on his business; he is at all times amenable, in common with medical men, midwives, and dentists, to the jurisdiction of the above board. In

* Salts of morphia have been met with in commerce, containing ninety-nine and a half in the hundred of foreign matter; nor is it by any means uncommon for a practitioner to vaunt his administering calomel in the dose of a hundred grains and upwards.

† Daniel Webster.

* Medical Gazette, Jan. 10, 1845.

like manner, all questions relating to the public health, to the prevention or treatment of epidemics, to hospitals for the sick and insane, come within its cognizance.

The whole system works exceedingly well. Medical men are held in just estimation, and liberally rewarded for their services.

Nothing, indeed, can exemplify in a stronger light the hazard of removing all restraint than a comparison of the state of the profession in the United States and in Mexico. In the former country it is pauperized and of no repute, in the latter it is honoured and prosperous.

BATHS FOR THE MILLION; BATHS FOR THE INDIVIDUAL.

CLEANLINESS has long been admitted to be next to godliness; and ever since we have seen Lord Malmesbury's Memoirs, just published, we have had greater sympathy with George IV. than we can pretend to have had before. The Princess Caroline, it seems, prided herself upon the rapidity of her toilette; she huddled on her clothes anyhow, and without even the merest sham application of soap and water as a preliminary. The special ambassador had actually to explain to the princess and her woman the propriety of anticipating the dressing by proper ablutions, by a *toilette de propreté*; it was only after this that he succeeded in having the princess presented to him in the morning, '*well washed all over!!!*' We presume there is not a princess in Europe, at the present time, who would require such a lesson as Lord Malmesbury felt it his duty to read to the Princess Caroline of Brunswick, not quite half a century ago. There are many, however, who are neither princesses nor princes, who will not be the worse of a word of admonition on the subject of his *toilette de propreté*—by which is to be understood something more than even the most liberal application of water, whether hot or cold, to the face and hands in the morning. We wot of no greater luxury than a thorough sponging on getting out of bed; next to temperance

in all things, indeed, we look on this, or something akin to it, as the greatest preserver of health; it is almost a substitute for that indulgence in country air and recreation for a certain portion of the year which all who live "in crowded cities pent" so anxiously sigh after, but which the great majority of the community, and we of the medical profession especially, sigh after in vain.

Any improvement on the means of enjoying the cheap and wholesome luxury of cold water to the general surface of the body in the morning, we look on as a boon conferred on society, as another instrument for prolonging human life. The japanned or painted tray that is now so commonly sold in the shops, and a good sponge, are the simple implements; and they are good so far as they go. Until lately, the only substitute for them was the somewhat costly and often cumbrous and otherwise inconvenient shower bath. Now we have the shower bath made portable, reduced to such dimensions that it may be put into a small box or portmanteau, and carried with the traveller wherever he goes. Our readers must surely have observed in the hardwaremen's shops, a figure, with dripping locks, and dimly seen through the shower that is falling from a somewhat elegantly shaped vessel held over the head? This is a representation of a portable shower bath, the contrivance of an ingenious gentleman of the name of Hazard, which we are anxious to introduce to our readers. The ordinary sponging tray, and this apparatus, enable us to command a shower bath at a minute's notice at all times, and make us independent of more costly and cumbersome contrivances. We have heard a great deal lately of baths for the common people; in our zeal for the mass, let us not forget the individual. And now that the year is turned, and "Socrates is no longer seen white with the snow," let us recommend those among our readers who have not yet indulged in the luxury of tepid or cool or cold general ablution, to commence forthwith to add one, two, or three years to the absolute length of their lives, and a vast sum of innocent enjoyment to their pleasures, by the daily use of Mr. Hazard's portable shower bath.

MOVEMENT IN THE PROFESSION.

A MEETING of general practitioners resident in Brentford and the vicinity, was held upon the 21st current, at the Royal Hotel, Old Brentford; Dr. Day, of Acton, in the chair. The Bill of Sir James Graham was wholly repudiated. It was maintained that the interests and efficiency of the general practitioners would be best promoted by incorporation of their body, so as to include all who, at the time of granting the charter, are legally qualified; and that the Society of Apothecaries deserve the confidence and support of the profession for their conduct in reference to the proposed charter. An honorary secretary was to be appointed, and a deputation to wait upon the county members to urge their strenuous opposition to the above bill in parliament.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Tuesday, January 14th, 1845.

MR. STANLEY, President, in the Chair.

Three Cases of Hard Circumscribed Tumors in Muscle, disappearing under the influence of the Iodide of Potassium. By THOMAS TATUM, Esq. Surgeon to St. George's Hospital, and Lecturer on Anatomy.

THE author relates three cases of tumors in the substance of muscle, supposed to be the effects of chronic inflammation, and deposition of coagulable lymph between the fibres. In each of the patients, the swellings were situated in the sterno-cleido-mastoid muscle; and in one, a similar tumor afterwards formed in the clavicular portion of the pectoralis major muscle, but which was distinguished by being of a bony hardness, and apparently connected with the periosteum of the clavicle. The author is of opinion, that had the progress of the disease not been interrupted early, ossific deposit would probably have taken place in the tumors, and the muscular structure been converted into bony tissue. He draws particular attention to the decided influence which the iodide of potassium had in removing the tumors, and the inefficiency of various other remedies which had been previously tried.

Mr. Cæsar Hawkins had found in these cases that the inflammation was not always, though frequently, confined to the muscles. It sometimes implicated the cellular tissue.

Sir G. Lefevre inquired the experience of members in the use of iodine. He had seen a case in which the use of iodide of potassium for secondary syphilis, in doses of ten grains three times a day, for four or five months, was said to have produced the loss of virile power. The testicles were not absorbed. He had heard of cases in which iodine had affected the mammae, but not the testicles.

Mr. Cæsar Hawkins observed, that notwithstanding the constant employment of iodine and its compounds by medical men, he had never seen or heard of a case like that alluded to by Sir G. Lefevre.

Mr. Curling had not seen tumors similar to those described in the paper affecting the sterno-mastoid muscle. He had, however, in this muscle, seen indurations resembling cartilage, occurring two months after birth, and, by their influence, completely fixing the head. These tumors had given way under the use of mild liniments.

Mr. Acton had witnessed the extensive employment of iodide of potassium by M. Ricord, and had himself employed this medicine in a great number of cases. No such effect as that mentioned by Sir G. Lefevre had ever come to his knowledge. Iodide of potassium sometimes produced pain in the stomach from being given in too small a quantity of liquid. He prevented this effect by giving it in a large quantity of water. This medicine also occasionally produced a metallic taste in the mouth, and a spongy and hæmorrhagic condition of the gums.

Mr. Snow mentioned the case of an infant in which, in consequence of suddenly twisting the head round, a tumor, with tenderness, arose in the course of the sterno-mastoid muscle. The swelling remained for ten or fourteen days, but was removed by mild lotions and liniments.

SPECIFIC GRAVITY OF URINE.

ON A VERY READY AND EASY MANNER OF ESTIMATING THE QUANTITY OF SOLID MATTER HELD IN SOLUTION IN ANY GIVEN QUANTITY OF URINE OF A GIVEN SPECIFIC GRAVITY (AT 60° FAHR.)

To the Editor of the Medical Gazette.

SIR,

AT a time when the morbid conditions of the urine are attracting much attention, and when it is believed that important inferences may be deduced from ascertaining the amount of solid matter excreted from the kidneys in a given time, as compared with the amount so discharged in health, it seems a matter of some importance to call the attention of the profession to a very simple and accurate method of arriving at this result. My purpose, in this letter, is to call attention to the Table constructed by Dr. Henry, in which

he gives the solid contents of a wine pint of urine, of specific gravity varying from 1020 to 1050—a table, I may remark, which has received the sanction of Dr. Prout, since he copies it at page 27 of his work on the Nature and Treatment of Stomach and Urinary Diseases; and also of Dr. G. O. Rees, who not only quotes it at page 147 of his book on the Analysis of the Blood and Urine, but adds, that he “has had occasion to test its correctness, and can recommend it as calculated to afford most satisfactory results.”

Now if this table be examined, it will be found that there is an increase of solid contents in each wine pint of urine, corresponding to the increase of one degree of specific gravity of exactly 19.2 grains; or of 1.2 grains of solid matter in each ounce for every increase of one degree of specific gravity. Hence a very simple process will give us the amount of solid contents in urine of any given specific gravity, say of 1025; for we have only to multiply the constant quantity 1.2 grains by 25 (making 30 grains), to give us the solid contents of one ounce, whose specific gravity is 1025; and this again by the number of ounces voided in any given time, say 40 ounces (making 1200 grains), to give us the whole quantity of solid matter dissolved in the urine passed in that time. This rule will be found on trial to give results so nearly coinciding with those of the table (the error is constantly just 1.6 grain in excess in the wine pint), it is so easy both to recollect and to apply, and so much more convenient than reference to a table not always at hand, that I shall make no apology for trespassing on your pages, with the view of bringing it under the notice of your readers.

I remain, sir,

Your obedient servant,

ALGERNON FRAMPTON, M.D.

Physician to the London Hospital.

29, New Broad Street,
Jan. 21, 1845.

FORM OF GALVANIC APPARATUS.

The best form of galvanic apparatus for medical purposes is the electro-galvanic with rotatory magnet.

RECEIVED FOR REVIEW.

Elements of the Comparative Anatomy of the Vertebrate Animals, designed especially for the use of students. By Rudolph Wagner, M.D. Professor of Comparative Anatomy and Physiology in the University of Göttingen, &c. From the German, by Alfred Tulk, M.R.C.S.E. 8vo. pp. 264. London: Longmans, 1845.

The Retrospect of Practical Medicine and Surgery, &c. Edited by W. Braithwaite, Surgeon to the Leeds General Eye and Ear Infirmary, &c. Vol. X. July—December,

1844. London: Simpkin, Marshall, & Co.
1845. 12mo. pp. 306.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

List of Gentlemen admitted Members, Jan. 3.—F. W. Pettigrew.—E. Jeffery.—T. M. Girdlestone.—T. M. Leak.—R. Allsop.

MORTALITY OF THE METROPOLIS.

Deaths from all causes registered in the week ending Saturday, Jan. 18.

ALL CAUSES.....	1010
SPECIFIED CAUSES.....	1007
I.—Zymotic (Epidemic, Endemic, and Contagious) Diseases, 223; among which, of—	
Small Pox	54
Measles	37
Scarlatina	45
Hooping Cough	28
Croup	9
Thrush	1
Diarrhoea	14
Dysentery	0
Cholera	0
Influenza	3
Typhus	39
II.—Dropsy, Cancer, and other Diseases of uncertain or variable Seat 88; among which, of—	
Inflammation	0
Dropsy	29
Scrofula	5
Cancer	6
Atrophy	16
Debility	14
Sudden Deaths	11
III.—Diseases of the Brain, Spinal Marrow, Nerves, and Senses, 143; among which, of—	
Hydrocephalus	32
Apoplexy	21
Paralysis	22
Convulsions	43
Insanity	1
Delirium Tremens	1
IV.—Diseases of the Lungs, and of the other Organs of Respiration, 325; among which, of—	
Pneumonia	89
Hydrothorax	5
Asthma	35
Phthisis or Consumption	146
Diseases of the Lungs, &c.	12
V.—Diseases of Heart and Blood-vessels	
VI.—Diseases of the Stomach, Liver, and other Organs of Digestion, 63; among which, of—	37
Teething	16
Gastritis	1
Enteritis	7
Tabes	11
Hernia	5
Disease of Stomach, &c.	3
Disease of Liver, &c.	7
VII.—Diseases of the Kidneys, &c.	
VIII.—Childbirth, Diseases of the Uterus, &c. 10; among which, of—	8
Childbirth	5
Disease of Uterus	3
IX.—Rheumatism, Diseases of the Bones, Joints, &c.	
X.—Diseases of Skin, Cellular Tissue, &c.	5
XI.—Old Age	1
XII.—Violence, Privation, Cold, and Intemperance	
	10

WILSON & OGILVY, 57, Skinner Street, London.

THE LONDON MEDICAL GAZETTE,

BEING A
WEEKLY JOURNAL

OF
Medicine and the Collateral Sciences.

FRIDAY, FEBRUARY 7, 1845.

NOTES OF A LECTURE ON PHLEGMONOUS AND PHLEBITIC OPHTHALMITIS,

By DR. W. MACKENZIE,

Of Glasgow.

WE lay aside the term *Ophthalmia*, and adopt *Ophthalmitis*, when the whole eyeball, or, at least, all its most important structures, are at one and the same time, and from one and the same cause, affected with inflammation. I have already explained to you, that not unfrequently inflammation, attacking at first only one of the textures of the eye, spreads from structure to structure, till the whole are involved, and the functions of the organ destroyed; but this is not the sort of case I am now about to describe. The disease which I have now in view much more speedily involves the whole globe of the eye, and also the parts around the eye, especially the ocular capsule, which I formerly shewed you surrounding the ball, and giving passage to the six muscles which are inserted into the sclerotica. The ophthalmitis I have now in view depends on a number of different causes, and thus we might distinguish, if we chose, various subspecies of the disease; but the two most prominent are, injuries of the eye, and the circulation of purulent matter in the blood. Arising from the former cause, the disease has been termed *ophthalmitis phlegmonosa*, or *traumatica*; and from the latter, *ophthalmitis phlebitica*. I have seen some cases, in which the cause was altogether obscure, the disease arising apparently spontaneously; and such we might regard as *idiopathic*.

The disease in question has been known under various other names, besides that of ophthalmitis. It is the *ophthalmia interna propria sic dicta* of Beer; the *phlegmon oculaire* of Dr. Roguetta. Resembling a paronychia in the tense state of the inflamed

parts, and the severe pain by which it is attended, the disease has been styled improperly *panaris of the eye*—panaris, you know, being a corruption of paronychia.

Stages of ophthalmitis.—An attempt has been made to divide the symptoms into three stages, but I doubt the accuracy of the division. The *first* stage is supposed to be one of pure inflammation, denoted chiefly by pyropsia, and extending from the commencement of the disease till the retina is deprived of sensibility; the *second*, is that of protrusion of the eyeball, and of suppuration in and behind it; the *third*, that of spontaneous rupture of the ocular capsule, or of the eyeball, or of both; but before this happens, the case often terminates fatally, especially in phlebitic cases.

Symptoms.—If the *first* stage is to include what we observe before the eyeball is protruded from the orbit, the following are amongst the symptoms of that stage. There is slight external redness; the conjunctiva being rather oedematous than inflamed, or affected with what some have called a *white chemosis*. The aqueous humour presents a muddy appearance, or is even tinged with blood. The fundus oculi appears reddish. The iris changes its colour from inflammation, the pupil becomes somewhat contracted, and the disease is apt to be mistaken for iritis. The capsule of the lens sometimes becomes opaque, in other cases continuing transparent. There is generally severe pain in the bottom of the eye, and in the orbit; pulsating pain, exactly as in intense whiteloe; the pain extends to the forehead and temple, and is accompanied by a feeling of burning heat, tension, and fulness, as if the eye could not be contained within the orbit. There is much intolerance of light, and a sensation of shining flaming spectra before the eye. This by and by subsides, the retina becoming insensible, from change of structure, or from the pressure of the purulent matter which is thrown out on both its surfaces. For a time, pressure on the retina causes photopsia or pyropsia, but as the

pressure increases it renders the retina totally insensible.

The total loss of sensibility of the retina may be regarded as a sign of internal suppuration having taken place, but the most striking symptom of the *second* stage is the protrusion of the eye. You would say, the eye is very much swollen, but this is a deception. You would say, were you not acquainted with the fact, that the eye was prodigiously enlarged, that it was almost as big as the fist, but I tell you, this is a deception; for after death, you find the eye, which seemed so greatly enlarged, nearly, if not quite, of its natural size. The eye is pressed forwards by an effusion into the cavity of the ocular capsule, and in this state of exophthalmos, covered as it is by a chemosed conjunctiva, the upper eyelid stretched tensely over it, and the lower eyelid everted, it has every appearance of being in itself greatly enlarged. It is also excessively hard to the touch, as if some fluid was pent up within it, much more in quantity than it contains in the natural state. This is partly true, but the internal effusion is not the sole, nor the chief, cause of the excessive hardness and tenseness of the eyeball. The effusion within the ocular capsule is the chief cause of this symptom, as well as of the protrusion of the eye. This symptom, of protrusion, sometimes occurs early in the disease, sometimes late, and not till the interior of the eye is disorganised and vision extinct. It is right that you should be aware, that there are diversities in the progress of the disease, and even in the order in which the symptoms follow each other. There is an involuntary fixedness of the eye in this stage, the state of pain and swelling rendering any contraction of the muscles unavailing, or perhaps impossible. You cannot even push it from side to side, in the orbit, it is so completely fixed. The conjunctiva continues greatly swollen, and what is a singular thing, and which I have never seen except in cases of phlegmonous or phlebitic ophthalmitis, the conjunctiva is covered, especially that portion of it which lines the lower eyelid, by a layer of coagulable lymph, which you can peel off like a membrane, and which by and by is again formed. This is met with both in the traumatic and in the phlebitic cases, and serves to show the analogy existing between these two varieties of the disease. If the lens and its capsule have continued transparent, (for I have already told you the lenticular capsule sometimes becomes opaque in the first stage of the disease,) you may sometimes observe the vitreous humour of a grass-green colour, the result of pus effused within the hyaloid. The iris is now seen to advance towards the cornea, and matter is plainly deposited in the posterior and anterior chambers.

The whole eye is now full of purulent

matter, and so is the ocular capsule: and if life is prolonged, the disease, unless interfered with by art, passes into the *third* stage. The matter makes its way out, exactly as the matter of a whiteloe, after immense suffering, will make its way to the surface and escape. The bursting of the eye, or of the capsule, is a means of saving the life of the patient, against whose recovery the chances are very great, if the disease is left to itself, and no spontaneous evacuation of the matter takes place.

Now, sometimes the cornea becomes infiltrated with matter, sloughs, and bursts; and this is the only disease of the eye in which I have seen a distinct leathery slough separate from the eye—the cornea, in fact, like a bit of white leather, which has been steeped in water. You often hear, indeed, of sloughing of the cornea, but what is called sloughing is merely destruction by ramollissement and ulceration, not actual separation of the part in a mortified state, as you sometimes see it in ophthalmitis. The evacuation of the eye follows the separation of the cornea, and the eyeball becomes atrophic. In other cases, it is the sclerotica which gives way, and this generally into the cavity of the capsule, which, bursting in its turn through the conjunctiva, allows a large quantity of matter to escape. In a third set of cases, the capsule alone gives way, the eye remaining entire, but so similar is this event to bursting of the sclerotica, that they are apt to be confounded. You see an aperture through the conjunctiva discharging pus, and you put a probe into it, and the probe seems to pass fairly into the cavity of the eyeball, while it may have gone only into that of the ocular capsule. If the eye retains anything of its natural appearance—its natural size and shape, and much more if it retains any sensibility to light, depend on it the eye has not burst, the capsule only has given away.

The constitutional symptoms which attend ophthalmitis are of variable intensity, but in general they are very severe. The patient is affected with rigors, anxiety, insomnia, delirium, and sometimes with convulsions, especially if the case is about to terminate fatally. In the commencement, the pulse is full and throbbing; in the later stages of the disease, it is small, weak, and very quick.

Terminations.—The disease terminates in different ways. A perfect recovery is very rare indeed. Sometimes the termination is in amaurosis, the form of the eye remaining natural, the pupil contracted, the lenticular capsule opaque, the retina insensible. In such cases the treatment has been partially effective. The termination may be in suppuration and rupture of the eye, or of the capsule, or of both. In this case, the eye ultimately collapses. Death is no uncommon termination of ophthalmitis, and

would happen more frequently, were it not for the bursting of the eye, or the artificial opening of it. The sort of relaxation which follows, reduces the inflammation, just as a whitlow is relieved when the finger bursts, or is divided by a deep incision. When neither naturally or artificially relieved, the patient becomes comatose, and expires sometimes very suddenly. On dissection, you find matter within the ocular capsule, on both surfaces of the retina, and within the hyaloid.

The causes of ophthalmitis are first of all, injuries; such as, the operations for cataract, not extraction only, but sometimes even division through the cornea or the sclerótica; the excision of staphyloma; injuries received in blasting stone; and the like. Sometimes, in particular states of the constitution, very slight injuries, a mere prick, will give rise to phlegmonous ophthalmitis. A second cause about which we are perfectly sure, is the circulation of pus through the system, arising from the inflammation of a vein. The pus secreted by the sanguiferous membrane passes into the tide of the blood, and becoming arrested in some of the minute vessels of the eye, perhaps in the veins of the choroid, it there excites inflammation, and a new secretion of matter, which we find effused in the situations I have mentioned to you, after death. This is not, as it was once supposed, a mere deposition of the pus, carried in the circulation from the vein originally inflamed. It is a new secretion of pus altogether, from vessels excited to inflammation by the pus globules becoming arrested in them. The pus formed in the veins in cases of diffuse cellular inflammation, may, in this way, excite ophthalmitis. Some time ago, I was requested by a medical friend to visit a lady, who some days after her confinement was seized with headache, rigors, quick pulse, intense pain in one of her eyes, loss of vision of that eye, and swelling of the conjunctiva. She soon became comatose after I saw her, and died on the eleventh day after her confinement. I pronounced the case to be one of phlebitic ophthalmitis, probably originating in inflammation of the sinuses of the uterus. On dissection, we had made several incisions into the walls of the uterus, without discovering any diseased appearances. On examining, however, the place where the placenta had been attached, we found it covered with sanious purulent matter, and several of the veins proceeding from that place filled with pus.

It is a remarkable circumstance, that the symptoms in phlebitic and those in traumatic cases of ophthalmitis bear a strong resemblance to each other. The same pale chemosis of the conjunctiva, the same layer of lymph on the inner surface of the lower eyelid, the same excessive protrusion of the eye from the orbit, the same sloughing of the cornea!

Really, we could not tell, were we not informed by the history of the case, whether the ophthalmitis presented to our examination was traumatic or phlebitic. Does this arise from the pathological condition in the two cases being similar, inflammation in the veins of the eye in both, excited directly in the one and by the circulation of matter in the other? There is reason to believe that ophthalmitis follows as a sequela of fevers, both eruptive and others, such as measles, small-pox, scarlatina, and typhus. Now, in these cases, is the cause a circulation of pus, secreted perhaps in the veins of the abdominal viscera? These are queries, you see, which we cannot at present pretend to answer.

The treatment of ophthalmitis, whether traumatic or phlebitic, requires, in the first place, the free use of the lancet, cupping, and the application of leeches.

Tartar emetic in large doses has been recommended; a solution of six grains, say, in six ounces of water, and a table-spoonful of the solution to be given every half hour. But this I have not tried, as it would interfere with the free exhibition of mercury, which I consider to be more efficacious. The only case of ophthalmitis in which I have witnessed a perfect recovery was one in which I made the mouth speedily sore with calomel and opium. The aspect of the case was very bad, so that I considered it my duty to announce to the friends the dangerous situation of the patient; but as soon as the mercury told on the mouth, the ophthalmitis began to subside, the eyeball retreated into the orbit, and a perfect cure took place.

Counter-irritation to the feet, such as, by mustard-baths, or mustard-poultices, and counter-irritation to the nape of the neck by blisters, as well as blisters behind the ears, will be proper.

Pledgets, wrung out of cold water, and frequently changed, are the best local application in the early period of the disease; afterwards, a warm poultice.

Extract of belladonna may with propriety be smeared on the eyelids and eyebrow.

Should the patient become very weak in consequence of the pain and fever, and the debilitating influence of the treatment, mild nourishment must be afforded him, and you may give him quina. But in the early stage, you will, of course, recommend abstinence from food, and water only for drink.

The last point in the treatment refers to the evacuation of the serous fluid and pus collected within the ocular capsule, or deposited within the eye. I have, in several cases, punctured the eyeball in ophthalmitis, and thereby, I think, have saved the life of the patient. Sometimes I punctured the cornea, sometimes the sclerótica, and even when no pus, but only blood and watery

fluid were discharged, the discharge gave great relief by the relaxation it afforded to the compressed and distended eye.

The plan of opening the ocular capsule I first put in practice at the Eye Infirmary in February 1842. The eye, affected with ophthalmitis after an injury, was excessively hard, and greatly protruded, but around it I felt an obscure fluctuation, as if from fluid accumulated in the cavity of the ocular capsule, and this I determined I should attempt to evacuate. I went to work almost as if I had meant to operate for strabismus, dividing the conjunctiva in a vertical direction at the inner canthus, and towards the lower eyelid, and then directing the lancet backwards by the side of the eyeball, between the eyeball and the lower inner wall of the orbit, so as to avoid the rectus internus and rectus inferior. There was a sudden discharge of serous fluid, mixed with pus, and immediately the eyeball sunk back, and the cornea became quite flaccid, showing that the cause of the previous excessive hardness of the eye, and of its protrusion, had been not in the eye, but behind it. This, then, I should recommend to be done in all similar cases, and done early; not delayed till the eye is disorganized, or the patient sinking into the state of coma. The operation is simple, and easy of performance, and affords the most likely means of saving both the vision and the life of the patient. It is probable that opening the ocular capsule in the manner described may be of use in some other cases of protrusion of the eye—cases of exophthalmos altogether independent of inflammation, and where there is no reason to suspect the existence of any enlargement of the lachrymal gland, or of any solid or encysted tumor in the orbit, but merely a dropsy of the capsule; but to discuss this proposal at present would lead us away from the matter now in hand.

OBSERVATIONS

ON THE

NATURE AND TREATMENT OF THE MORE IMPORTANT DISEASES OF THE NERVOUS SYSTEM:

With Illustrative Cases.

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Society of Edinburgh, and Physician to
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(For the *London Medical Gazette*.)

[Continued from page 574.]

CASE I.—A man, 32 years of age, was seized, after sleeping in a damp bed, on November 19, with pneumonic

symptoms, for which, in the next five days, he took only an emetic. On the sixth day of the illness he was bled to sixteen ounces; and on the ninth day, after a blister and free purging, he made no complaint but of headache, the pulse being at 80, and firm. In the course of the next six days little medicine was given, all the symptoms being relieved, excepting that the pulse remained as before. He then had a return of severe headache, attended with sleeplessness, vomiting, and a bleeding at the nose; the pulse still at 80, and stronger, on the eighth day from the first head complaint—a purgative now given. The following day headache severe; the face tumid; noise in the ears; the tongue white; the pulse as before.

Ten leeches on the head.

The day after, being the fifth of continued headache, he was seized in the middle of the night with apoplexy and palsy of the left arm; the pulse 112 just after the invasion. On the bowels acting he became sensible, and recovered the power of the arm; and in a few hours complained only of shivering and pain in the stomach; the pulse then 80, and firm.

A purgative of jalap, calomel, and senna.
Ten leeches to the head.

On the following day the symptoms were much relieved after a copious purging; but the day after, the 7th of more constant head complaint, the headache, noise in the ears, and swelling of the face, returned with severity; the pulse 72, very firm.

Bleeding to 20 ounces—the blood very sily and cupped.

The 8th day, the symptoms the same.

A purgative.

The next day, worse.

A blister behind the ears, and a purgative.

The 10th day, the same state. Pulse 96.

A purgative.

The 11th, a little relief, but the pulse 90, and full.

A purgative.

The 12th day, *i. e.* the 19th from the first head symptom, vertigo, and the bowels torpid.

Twelve leeches to the head, and a purgative.

In the evening, seized with stupor and convulsions, during which he was

bled to 22 ounces—the blood still very sily and cupped; the pulse after it 102; headache then relieved after leeching. The following day, delirium; pulse 90, and full; the bowels then purged, and he complained only of the hearing being acute.

Bleeding to 22 ounces—the blood as before.

Afterwards, a tendency to coma; pulse 96, sharp.

Leeches to the head.

The 14th day, delirium and costiveness.

A purgative.

In the evening, delirium continuing, and the respiration being stertorous, 20 ounces of blood were drawn from the temporal artery, which was sily. The next day, stupor, squint, and involuntary stools. Bleeding again from the artery to 14 ounces, which was followed by convulsions, and death in six hours.

Inspection.—Slight serous effusion under the arachnoid of the right hemisphere; a little also in the ventricles. The blood-vessels of the brain were not turgid; the spinal cord natural. Some effusion in the pericardium.

I saw this case in the practice of a gentleman now deceased.

If the early severity of the head symptoms, occurring after a pneumonic inflammation, had been adequately treated, had excited wholesome alarm, and if their remission had been regarded as deceptive while the pulse remained full and firm, and if the active bleeding in the latter stage had been adopted earlier, with more purgatives and mercury, might not the result have been different? The remarkable want of correspondence in the symptoms and morbid appearances is referrible to the treatment shortly before death.

CASE II.—A painter, aged 30, had complained for two years occasionally of severe headache, vertigo, and staggering, pain in the stomach, and sickness, particularly on taking even a small quantity of fermented or distilled liquors. He had had the colic from lead, but the bowels were generally regular.

On October 23d, 1838, he supped heartily on beef-steaks and porter, and the next morning had vomiting and

feelings of illness, but was able to pursue his work on that and the three following days. On the 27th, while painting the ceiling of a room, after a moderate dinner, he complained of his head, felt faint, staggered, begged to be taken into the air, and fell into profound apoplexy. He was bled largely an hour after the attack, after which he vomited. In two hours more I saw him, still in coma; the pulse 72, and small; the pupils dilated and fixed; and in another hour he died.

Inspection.—Much bloody ichor issued from the mouth; blood extravasated beneath the scalp at the vertex and occiput (which did not seem to have happened from a blow in falling). The cranium very thick, hard, and heavy, presenting on its inner surface many singular ridges of bone. The dura mater vascular, and adherent to the arachnoid; the lateral sinuses turgid with blood; the arachnoid thickened and opaque, with many minute deposits of calcareous matter on it at the base and vertex of the brain; a little serum beneath it. The pia mater very vascular; air and serum in its vessels; blood effused on it at the vertex, and near the medulla oblongata. The substance of the brain at the upper portions of the hemisphere was soft, and studded with bloody points; the lateral ventricles filled with clotted blood and serum; their walls much broken down and ulcerated, and from their floor a large cavity extended through the crura cerebri, and at the contiguous portion of the cerebellum, where it became a cell as large as a pigeon's egg, filled with blood; its boundaries also were softened, and apparently ulcerated. The large arteries at the base of the brain were dilated and flaccid.

CASE III.—A woman, 35 years old, who had suffered much from mental anxiety and poverty, had complained, in her pregnancy in October 1834, of symptoms of mild peritoneal inflammation, with dropsy of the legs, which were relieved by a small blood-letting. In the following January she had an easy labour, followed, however, by much nervous irritability and despondency of recovery. On the fifth day after delivery, she complained much of headache, which subsided after a purgative, and she appeared unusually

well the next three days; then, after severe mental disquiet, at 11 A.M. she felt benumbed at the left arm, which feeling quickly extended to the upper parts, and was followed by an apoplectic fit. She was seen in an hour by her accoucheur, when she had become sensible, and appeared only a little hysterical. She then took some medicine, which she vomited, and fell into a profound apoplexy. I saw her at 3 P.M., senseless, cold, and nearly pulseless; the arms drawn with tonic spasm; the right pupil dilated and fixed, the left moveable and contracted. After this, on using clysters, sinapisms, and evaporating lotions to the head, the pulse became distinct and regular, the respiration less noisy and more equal, and she could move the legs. The reaction increased, and the temporal arteries, particularly the right, throbbed strongly. She was then bled from both arteries to 15 ounces; the blood extremely dark.

Death followed in five hours.

Inspection.—The whole surface of the right hemisphere darkly stained, from blood extravasated beneath the arachnoid; the pia mater much engorged with blood. The whole substance of this hemisphere was extremely softened, broken down, and filled with clotted blood; the left hemisphere in a similar state, but in a slighter degree. The wall of the right lateral ventricle much softened; very little serum in the cavities; the remaining parts of the cerebrum and cerebellum were soft.

This softening of the brain had long preceded the apoplectic attack, yet it was shown by no symptom but nervousness and lowness of spirits, which seemed to be sufficiently accounted for by the domestic circumstances of the patient. It was connected with defective nutrition of the brain rather than with an inflammatory condition, and constituted a strong predisposition to this most fatal form of apoplexy.

CASE IV.—A sailor, aged 22, while doing duty in stormy weather, Nov. 10, 1819, was attacked with stupor and convulsions, which were followed by palsy of the right limbs, and indistinctness of speech. He remained in this palsied state to the 20th, when the convulsions returned, and he came under medical care and my observation. The symptoms, pain at the head, com-

plete palsy of the right arm, imperfect palsy of the right leg; his utterance very indistinct, and on attempting to speak the tongue was seen drawn to the right side, the mouth to the left; the pupils sluggish, the left eye protuberant; pulse 78, very full; the thermometer at 98° on the palsied side, at 101° on the sound side; the tongue white; bowels regular; mental powers apparently unimpaired. He had used no remedies.

Bleeding to 16 ounces—the blood natural. Purgatives.

The following day, a return of epileptic convulsions; pulse 60; the bowels costive in spite of the medicine.

The head shaven; 12 leeches, a blister, and purgatives.

The 13th day from the attack, a recurrence of stupor and convulsions, with stertorous breathing; pulse 52.

Bleeding from the temporal arteries to 36 ounces (6 only would flow from the left).

Shortly after which the pulse rose to 72, and the convulsions ceased; but the pulse again fell to 50, very full and firm in the left arm; the thermometer at 95° on the palsied side, 98° on the sound. The 14th day, breathing less stertorous; the tongue less affected; pulse 60, weaker; thermometer at 90° on each side. In a few hours, a return of the apoplectic state. Pulse 54, full and strong; animal heat 97°.

Bleeding again from the temporal artery to 20 ounces—the blood natural.

Shortly after which the pulse was 72, and still full. The 15th day, still apoplectic.

Leeches, and a purgative clyster.

Death the next morning.

Inspection.—In the left hemisphere of the brain, just above the ventricle, was an abscess holding an ounce and a half of pus. Inflammation in the brain seems to have existed at the time of the invasion of the epilepsy and hemiplegia, and to have passed into the suppurative state on the 11th day, when the convulsions recurred, or on the 13th, when decided apoplexy supervened.

CASE V.—This case, although not one of apoplexy, is placed here as showing in its symptoms a remarkable contrast to the foregoing, while the

morbid appearances are similar. A man, aged 21, after unusual confinement and exertion in his business as a tailor, was affected, June 8th, 1835, with severe pain in the temples, back, and limbs, with shivering and vomiting after his dinner. He had been troubled for a few days previously with pain and severe throbbing in the head, broken sleep, loss of appetite, and costiveness; which were relieved on taking physic.

Calomel with Colocynth, and saline antimonial medicines, were now given by his medical attendant.

The next day the symptoms the same.

Bleeding to ten ounces; from which he fainted; the blood very buffy and cupped; leeches to the temples; purgatives continued.

10th.—Most severe pain at the crown of the head.

Head shaven; a cooling lotion, leeches, and a bleeding to six ounces, which again induced syncope; the blood less inflamed.

11th.—Much better; pulse 70; bowels slow.

Purgatives; cold bathing of the head.

The next day, occasional pains at the head.

Cold affusion, salines with digitalis.

In a few days he was so much better as to go out of doors, and felt well, except that the pain in the head returned every night, when he had been in bed and asleep for an hour two.

In a few days, however, these paroxysms were relieved by cooling lotions to the head; and about June 20th, he made no complaint; the natural functions were good, but his manner was dull. On the 25th, the beginning of the fourth week of the illness, he was obliged to lie down in the afternoon, and was observed to stagger in walking, after it. On being questioned, he said that he felt well, except when rising from sleep, but the appetite had failed. The next day he complained of having had more pain in the head during the night; the pulse had fallen from 70 to 60, and was small; the tongue white; the face pale; eyes clear. He afterwards walked out of doors that day, and said he felt well in the open air.

27th.—Severe pain in the head, and slight vomiting in the night.

28th.—Vomiting after breakfast, then sleep, and a return of pain on awaking. He was able, however, to dine out; ate veal and drank porter; after which he again vomited, and the headache became intolerably severe. His medical attendant saw him in a few hours, and found the pulse weak and slow. An anodyne was given; and at 10 p.m. I saw him in the most excruciating agony at the temples; but the mental powers collected, the eyes and pulse natural, and he had no fever; his whole state exhibited the features of an attack of nervous headache succeeding to an inflammatory affection which had passed away.

A blister on the neck, tepid vinegar to the head, a stimulant foot-bath, and a slight cordial.

The pain continued unremitting until midnight, when he suddenly fell back in the bed and expired.

Inspection.—The skull very thick; the occiput vascular throughout its structure; the pia mater rather bloodless; in the upper part of the right hemisphere was an abscess containing an ounce of fetid green pus, its walls formed by coagulated lymph and indurated brain, forming a diseased mass the size of a hen's egg. The remainder of the encephalon was natural.

CASE VI. also is not one of apoplexy, but allied in its nature to a comatose affection, and marked by peculiar symptoms.

A man, aged 22, who had lived intemperately through the winter, contracted syphilis, and taken quack medicines, was affected at the end of April, 1830, with jaundice, which disappeared without medicine at the end of three weeks. In ten days more he had vomiting and severe pain in the head, with occasional fits of stupor, and a presentiment that he should die soon. These symptoms persisted for a week without disabling him for his labour, and on June 4th, 1830, he came under medical care, for the severe vomiting and costiveness.

Ordered—ten grains of calomel.

On the 5th the pulse was only 46! the vomiting had ceased on taking the calomel, but the costiveness was not overcome.

The head shaven, the calomel repeated, and purgatives.

The following day, much pain at the temples, occasional stupor, the pulse still 46; the bowels freely purged.

Cold to the head, cupping-glasses to the neck, small doses of calomel, and the purgatives continued.

The symptoms not being relieved in a few hours, he was bled to 10 ounces, after which he lay without speaking, tossing the head from side to side, and in two hours more he died unexpectedly.

CASE VII.—*An instance of encysted abscess in the brain; with an extraordinary remission of the symptoms.*

A boy, about nine years of age, had a blow on the left temple with a nail, at the beginning of August 1830, which was followed in the course of eight days by occasional vomiting and slight stupor. On the 11th he still complained slightly of his head, but was able to walk some distance to my house: no severe symptoms showed themselves; the scalp over the injured part was slightly swollen.

Leeches, poultices, and purgatives.

In a week he came to me again, with the symptoms much relieved, but some pus was flowing from the wound; he was referred to a surgeon for further examination, and in three days was reported to be going on well. On the 20th, however, he had an epileptic fit. It was then feared that suppuration had taken place in the dura mater, as for the last few days he had been delirious and restless at nights. The next day it was found that the temporal bone had been perforated; but throughout the succeeding days, to the 28th, he seemed much better; on this day his manner was stupid, and he had ear-ache, and a quick pulse, and was become emaciated; on pressing the temple much, pus flowed out, evidently from beneath the skull, for a probe could be deeply introduced without any obstacle.

Milk diet; Calomel and Rhubarb.

30th. — Much purulent discharge, sweats, and a rapid pulse, without any other bad symptoms.

Sulphuric acid and infusion of rhubarb.

September 4th. — He was down stairs, not complaining of the head; good pus flowing from the temple; the natural functions good; but the pulse

120. A fortnight afterwards I met him in the street, improved in strength and flesh, and without any morbid symptoms but a quick pulse, and the purulent discharge!

October 6th. — A return of pain at the wounded temple, a rambling gait, and a pallid countenance.

9th. — An improved countenance; little complaint made; some fungus at the wound, which the surgeon touched with blue stone.

13th. — The discharge had ceased, he grew sick and vomited in the night, and complained of the head. The next day these symptoms were more urgent, with a tendency to stupor; the eyes dull; the pupils dilated; the bowels costive; yet there was little of fever.

The temporal region shaven, leeches and poulticed; calomel, scammony, and salts, in repeated doses.

15th. — More pain of the head, fever, and stupor; all the medicines vomited; costiveness remaining; pulse 100, full.

Leeches and the purgatives repeated; general bleeding attempted in vain.

At a consultation it was determined to incise the scalp and lay bare the temporal bone: on doing which, a hole was seen in it just above the ear, and the probe passed inwards to the depth of an inch and a half, but no pus came out. The divided vessels were allowed to bleed very freely. The next day all the symptoms were wonderfully improved.

Purgative clysters.

17th. — The sleep good; the bowels freely purged.

20th. — More headache.

Ten leeches; purgatives and Colchicum.

21st. — A sleepless night, succeeded by vomiting and more pain in the head.

22d. — Some stupor; a look of prostration; vital functions low; the left pupil much dilated and fixed. Life was protracted to the 26th, when the left eye was observed to be excessively prominent, its pupil as before; the arms were drawn with spasm, and death soon followed; at the end of three months from the injury, and a fortnight from the severe relapse.

Inspection. — The prominence of the eye-ball gone. The interior of the left temporal bone, near the perforation, rough, and denuded; the dura-mater

beneath the parietal bone adherent to the pia-mater, which was very vascular; bloody points throughout the hemispheres; the posterior lobe of the left hemisphere at its upper part extremely softened, and between this portion and the ventricle was an immense cyst containing three ounces of green pus,—the walls of the cyst very vascular; three ounces of serum in the right ventricle. The pia-mater of the spinal chord also was vascular.

CASE VIII.—A fine boy, seven years of age, some members of whose family had died of hydrocephalus and mesenteric disease, after wetting his feet in the beginning of September 1822, complained of acute pain and tenderness in the region of the lower dorsal vertebræ shooting round to the navel. The pain came on with remittent fever at regular quotidian noon-day periods; the bowels were very costive. He came under my care three days after the attack. The symptoms were instantly relieved on applying eight leeches to the spine, and giving calomel and castor oil: but in a few days he felt a transient numbness of the lower limbs, while sitting up. On the 13th, he got pain in the bowels and diarrhœa, and the sense of "sleepiness" in the legs continued. By October 7th, he was unable to sit up without pain in the back, and the abdomen was tumid. In January 1823, weak health remained; irritation in the bowels the leading symptom; which was relieved by a blister, the blue pill, and aperients. In a year from the attack, a posterior projection of the dorsal vertebræ was very conspicuous, attended with pain in the loins and legs, inability of stooping, swelled feet, tumidity of the belly, and hectic sweats. Issues, rest, and mineral acids, were then employed. At the end of November he shewed symptoms of irritation in the brain, with pain in the stomach and a furred tongue. The mineral acids were discontinued, being thought to disagree, and alteratives were substituted. During the next twelve months the spinal disease was tranquil. In December 1824, he had scarlatina-anginosa, and varicella which matured during the course of the former disease. In the next two years and half the curvature of the spine was unchanged, the abdomen was very prominent, and he suffered from pa-

roxysms of severe pain and cramp in the legs, which confined him to the couch for weeks together, but at other times he could walk about. At one time in this period he had cough and hectic, which threatened to end in phthisis.

On May 3rd, 1827, he was attacked with a severe return of pain and cramp in the legs, which was succeeded by vomiting, costiveness, and acute pain in the head. These symptoms persisted for four days, when the vomiting ceased, but the pain in the forehead, with fever, gradually increased; the bowels being very costive. On the 8th, I saw him, in great suffering in the head, and in the back at the seat of the curvature, with fever, delirium, and tremors; the pulse 60, unequal and intermittent, yet full. He was bled to five ounces; after which the pulse improved; but in another hour, while conversing cheerfully, he fell into convulsions and coma, with stertorous breathing; and the pulse became very weak. On the next day, the coma continued, the pupils were fixed, the limbs affected with severe spasms, but he sneezed and coughed! The spasms ceased on applying an opiate cataplasm to the pit of the stomach; and death ensued in a few hours.

Inspection.—The membranes at the vertex of the head were very vascular; an ounce and half of serum was effused beneath the dura mater: the arachnoid opaque. The hemispheres of the brain very large, soft, and vascular. The pia mater in the ventricles very vascular; the cerebellum soft and vascular. An extreme curvature of the dorsal vertebræ, and of the angles of the ribs; the front portions of the bodies of those vertebræ were completely carious, forming large loose sequestra; the spinal cord here was extremely wasted, its fibres so distinct as to resemble a skein of thread; presenting a singular specimen of ulcerative absorption of the chord.

CASE IX.—A female, aged 20, had been affected with severe epilepsy from the age of 9 years, with habitual paroxysms of headache and excitement of the pulse; and the thyroid gland was enormously enlarged. Every sort of treatment had been tried,—bleeding in all its forms, setons, mercury, shaving the head, cold affusion, nitrate of bismuth and of silver, arsenic: and air

and exercise;—and all in vain. Relief was obtained only from purgatives. In the beginning of 1834, the fits became more severe, and were attended by deeper stupor; and in February of that year, after having been under my care fourteen months, she died in apoplexy.

Inspection.—The skull large; its ossification very irregular, being in one part extremely thick and dense, in another thin; the interior rugged with osseous projections; the crista galli particularly large. The membranes very vascular and opaque: two ounces of serum in the ventricles; the brain soft; the cerebellum and medulla oblongata and optic nerves particularly so. The arteries of the brain much enlarged.

CASE X.—A fine boy, 5 years of age, was affected throughout October 1824, with severe costiveness and urgent vomiting of all his food, and of a yellow mucus,—yet the appetite was unimpaired! He had also at the onset a slight pain in the belly, and feverishness. On the 31st, the abdomen was still tender, with obstinate costiveness for six days; thirst and a furred tongue, but no heat of the skin; pulse 103: no complaint of the head, sleep calm.

Leeches on the belly, calomel with antimony, and effervescing salines.

Nov. 2d —Epigastric pain relieved; one stool from a clyster; vomiting as before.

Warm bath; abstinence; leeches repeated, one grain of opium, and a purgative clyster.

On the 3d, two large stools; still urgent vomiting, tongue loaded, and thirst.

Leeches and clysters.

5th.—Still vomiting, excited even by eating a bismit: purged of unhealthy stools by the clyster. On the 5th, symptoms better, still slight pain in the abdomen, and a dysenteric stool; mouth sore from calomel.

A blister on the belly, clysters, salines, with digitalis.

11th.—A return of vomiting and costiveness.

Clysters and a warm bath.

13th.—Still vomiting; pulse 16; a scybalous stool.

Medicines as before.

15th.—An emetic of ipecacuanha given, after which, and a clyster, a natural stool passed, and he said he felt well. This remission continued to the 20th; then appeared a return of vomiting and costiveness; pulse 100 sharp.

Leeches and clysters.

22d.—The same state.

Bleeding to 2 ounces; other remedies as before.

23d.—Much relief; the blood natural.

Purgatives and clysters repeated.

28th.—A copious natural stool, after which the appetite was good. On the 29th, a return of pain and vomiting, with diarrhoea.

Bleeding to 2½ ounces; the blood much inflamed; salines, with digitalis.

Dec. 1st.—Sleeplessness, and then some stupor; pulse 90. The 2d, pupils dilated, tonic spasms of the limbs, pulse 70, irregular; a scybalous stool from clysters.

Sinapisms and cordials.

Death in two days more, after nine weeks of illness.

Inspection.—The transverse colon much dilated, containing faeces in one cell; the descending colon and the rectum very small: inflammation in the mucous coat of the caput coli, and faeces lodged there. The small intestines generally empty, and their mucous coat healthy; but a diffused vascularity on the peritoneal coat of the ileum, and a slight intussusception near its valve. In the head, the dura mater vascular and adherent, the lateral sinuses turgid with blood; the arachnoid very distinct, serum beneath it and in the ventricle. At the interior anterior part of the cerebellum, a hard tubercle, the size of a nutmeg; no morbid vascularity near it, but the other part of the cerebellum was very vascular and softened.

[To be continued.]

THE EMPLOYMENT OF MESMERISM
DURING SURGICAL OPERATIONS.*To the Editor of the Medical Gazette.*

SIR,

I THINK the writers of the letters which have appeared in the GAZETTE, in answer to a communication of mine upon the above subject, do not seem always to have borne in mind the object I had in view in addressing you. It certainly was not that of advocating the various extraordinary pretensions of mesmerism, of which I know nothing, and believe almost as little; but of pointing out that one of its pretensions, which does not outrage all possibility of belief, and whose existence has been testified to by some competent and trustworthy witnesses, and which, if real, is susceptible of such immensely beneficial application, has never been tested by a class of the profession possessing full opportunities of examining it, and whose verdict would be considered satisfactory and final both by the profession and public.

The possibility of the production of the mesmeric sleep is all but generally admitted, and the question at issue is simply, whether insensibility to pain is always, usually, frequently, or ever, a concomitant of that condition. How the admission of the possibility of this should involve the recognition of the possibility of clairvoyance, &c. &c. I cannot understand. The instances which have been cited in your pages, and which were adduced during the discussion at the Medico-Chirurgical Society (similar examples of which I, in common with all who have frequently witnessed surgical operations, have seen), of persons possessed of the power of restraining all expression of suffering during operations, have nothing to do with the question at issue, unless it is intended to explain all the instances adduced as examples of collusion, which the respectability of several of the narrators forbids. The simple question is, whether the temporary annihilation of sensibility during the mesmeric sleep is so complete as to render the pain of an operation unfelt. The analogies derived from the observation of a suspension of consciousness to as great a degree as this, in many conditions of the economy, at least prove the possibility of this, and make

out a case for inquiry. This pretension of mesmerism, too, beyond all others, admits of being submitted to examination, under circumstances when the exactitude of the results can be rigorously investigated, and all collusion or deception easily guarded against. I do not think those act wisely who attempt to settle the matter by ridicule and jesting. The subject is a grave one, and I believe a heavy responsibility rests upon those who refuse it consideration.—I am, sir,

Your obedient servant,

JOHN CHATTO.

Great Coram Street, Jan. 25, 1844.

POISONOUS EFFECTS OF THE
CYANIDES.

NO. II.—BICYANIDE OF MERCURY.

To the Editor of the Medical Gazette.

SIR,

IN a former communication which you did me the honour of publishing in the GAZETTE of Jan. 17, I gave an account of the exceedingly quick and powerful action of cyanide of potassium; and from subsequent experiments I have found that it is constantly decomposed, and evolves the odour of prussic acid, when it is mixed with the contents of the stomach, or even with weak acid liquors, such as porter, &c.

Following out my inquiries into the other combinations with this radical, I have found that the bicyanide of mercury exhibits peculiarities in its effects which are perhaps worth recording; and to prevent the unnecessary detail which would result from the description of every experiment I have made with this salt, I shall merely relate its action in two cases; they will be sufficiently expressive of all the rest.

Exp. I.—Five grains of bicyanide of mercury were dissolved in two drachms of water, and given to a small terrier dog, which had been fed about two hours previous. After the lapse of three minutes it began to retch violently, and threw up the half-digested remains of its food; these smelt distinctly of prussic acid, and created that peculiar bitter sensation in the throat which is so characteristic of the poison. In the course of the next ten minutes the convulsive action of the diaphragm and abdominal muscles was most distressing; it vomited again and again,

bringing up at each effort a small quantity of thick mucus. Other effects of the poison were manifested in its confused appearance, the giddy staggering walk, as if the voluntary muscles were partially paralysed, and in its laborious sighing respiration. In about half an hour it became calmer, and then lay, as it were, exhausted, making every now and then an effort to vomit. So it continued for two hours, when it began to recover; and the next day it had got so much better, that it was able to run about and feed well; its evacuations, however, continued for two days to be copious, and tinged with blood.

Upon testing the vomited matters, ample evidence was obtained of the presence of prussic acid, by its odour; and of the existence of cyanogen, by its appropriate reactions. Mercury also could be readily detected by means of the galvanic test.

Exp. 2.—Two grains of bicyanide of mercury were dissolved in a drachm of water, and given to a small terrier puppy, about two months old; it had not been fed for six hours. In two minutes, while the animal was playing with another dog which was present, it began to stagger, and lose control over the hind legs; it did not appear, however, to be in any pain, for it made great efforts to play with its comrade; it then staggered forward, and in its efforts to progress fell repeatedly upon the nose. In four minutes the spasmodic action of the diaphragm had commenced, and it vomited a quantity of thick mucus, having a faint odour of prussic acid. It now lay as if the limbs were perfectly paralysed. The mental faculties were not affected, for it followed with its eyes the movements of the other dog. In five minutes after exhibiting the poison, the characteristic symptoms of prussic acid commenced; it was then violently convulsed, gave a loud scream, the limbs becoming spasmodically extended, and the head drawn back. From this moment the respiration became laborious; and although it appeared partially to recover, yet it soon went off again into convulsions, uttering loud cries. It then lay, as it were, exhausted. The breathing became gradually slower and slower, and the heart's action fluttering and irregular. After the lapse of twenty-three minutes, it was found

that reflex action had ceased; the eye could be touched without winking, and the respirations had diminished to six times in the minute; these gradually became less and less frequent, and in one hour after the exhibition of the poison the animal died without the least struggle.

On making a post-mortem examination, the stomach was found highly congested, as indeed it is with most of the cyanides—it smelt of prussic acid, but chemical reagents were not sufficient to recognise the cyanogen: mercury, however, could be detected by the galvanic test. The vessels of the brain were full of black blood, the right side of the heart and cava full, and the lungs slightly congested.

When bicyanide of mercury is injected either into the veins or the peritoneum it produces all the above symptoms, with the exception of the violent vomiting.

In one instance, when two grains of salt had been injected into the jugular vein, and the animal had fallen with the effects of hydrocyanic acid, artificial respiration was resorted to, and in twenty minutes it had so far recovered that it could breathe of itself. In this way it was kept alive for upwards of an hour, when it fell into that peculiar exhausted state with its breathing becoming slower and slower until it died.

REMARKS.—It appears from these experiments that two grains of bicyanide of mercury are sufficient to cause the death of small dogs; that it acts, when put into the stomach, as a powerful local irritant, occasioning violent vomiting, and subsequently purging and bloody evacuation. The constitutional effects are first a loss of volition; the animal totters, and loses control over the limbs as if they were paralysed. The mental faculties, however, are not impaired, nor does there appear at this stage to be either pain or spasm. The second effect is like that of prussic acid, violent convulsions, loud screams, and a spasm of the respiratory muscles; from this time reflex action ceases, and the subsequent effects are paralysis of the voluntary, and afterwards the involuntary muscles, coma, the breathing becoming slower and slower, and the heart's action fluttering, and subsequently laboured. It at first appeared that these effects were rather due to a

gradual liberation of hydrocyanic acid, which maintained a slow but constant action upon the system; but the fact that the same symptoms are produced when the salt is injected into the veins or peritoneum, leads to a belief that the effects are specifically those of the combined elements. These experiments also show that prussic acid is liberated from bicyanide of mercury when it mixes with the acid contents of the stomach, and secondly, that both it and the mercury are easily detected.

When the poison is given in a large dose, as in the first experiment, the irritating property of the bicyanide serves as its remedy, for it produces such constant and violent vomiting that it is entirely expelled.

Lastly, the post-mortem appearances reveal a highly congested state of the stomach, a semi-coagulated black blood, which fills the right side of the heart and cavæ, and a congested state of the vessels of the brain.—I remain, sir,

Yours respectfully,

H. LETHBY, M.B.

Lecturer on Chemistry at the Medical School of the London Hospital.

12, Tredegar Square, Feb. 4, 1845.

ORGANIZATION AND PROTECTION OF THE MEDICAL PROFESSION.

THE QUARTERLY REVIEW, &c.

To the Editor of the Medical Gazette.

SIR,

THE Bill "For the better Regulation of Medical Practice," &c. introduced into the House of Commons in August last, by Sir James Graham, has now been fully considered and discussed. Some of its provisions have been highly approved, others have been condemned. Whatever difference of opinion may exist as to the number and nature of the latter, there are two leading points in which the Bill is almost universally pronounced to be defective. 1. Its comparative disregard of the interests and future position of the general practitioner. 2. The removal of restrictions on medical practice. The general practitioner observes, that while the Bill takes great pains to incorporate physicians and surgeons (the College of Surgeons having also recently received a new charter, and the College of Physicians being on the eve of receiving one) no such care is manifested

on his behalf. He sees, moreover, that a Council is to be placed at the head of medical affairs, in which both the Colleges are to be represented, while the class to which he belongs is passed over in silence, although the Council is to have entire control over the profession, even to the settling of what are to be considered public medical institutions, and the classes of persons who are to fill them. In addition to all this, he learns, with dismay, that the protection afforded him hitherto by the Apothecaries' Act of 1815, meagre though it be, is to be withdrawn. No wonder that he should be dissatisfied, or that he should endeavour to find out means of procuring for himself that consideration which the Bill denies him. Amongst these means, we find it proposed that the general practitioners should be separately incorporated in a Royal College of Medicine and Surgery. This is a natural and not unreasonable proposition: it is one, nevertheless, the expediency of which should be carefully weighed, and I trust that if there be among the general practitioners those who would "take time to consider," and who are unprepared to give the scheme an immediate and unconditional assent, they may not be regarded as less zealous for the well-being of their "order," than are those who have within the last few weeks, taken a prominent part in advocating the establishment of a third College. It has been too much the custom to think and speak of physicians, surgeons, and general practitioners, as if they were members of different classes of society, rather than of one and the same profession, and differing only in the extent to which they pursue its various branches and departments. This is an unsatisfactory state of affairs, and should, if possible, be avoided. In any attempt to re-organize the profession, it should be our aim to unite, not to divide, the qualified practitioners of the healing art; and without at all interfering with classifications and distinctions, which have been sanctioned by time, usage, and public convenience, this object may, I conceive, be accomplished, and through the instrumentality of institutions already established. To this end, the whole profession might be regarded as one great national institution made up of two constituent parts—medicine and sur-

gery, the former represented by the College of Physicians, the latter by the College of Surgeons; these bodies, in other words, forming divisions or departments of a National College or Institution of Medicine and Surgery. Coincident with this, an Examining Board should be appointed which should be common to the whole profession, and before which every candidate for a "license to practise" should be required to present himself—irrespective of the particular line of practice he might subsequently adopt, or of any degree or title he might be desirous to assume. The license, granted after successful examination, should authorize its possessor to act as a legally qualified and registered practitioner in any part of the British dominions. The Licentiate of Medicine and Surgery should be entitled to make application to have his name enrolled—on payment of a moderate fee, but without further examination—as an Associate or Member of the joint Colleges of Physicians and Surgeons*, *i. e.* of the National Institution of Medicine and Surgery—by what name soever it might be called. Associates or members should not, however, be admitted *de jure*, but elected by ballot; a preference being given to election, as affording, in some degree, a barrier against the introduction of improper parties.

Graduates in medicine, possessing the license to practise, should be admissible by election to the fellowship of the College of Physicians, provided their degrees were obtained under regulations which should have been sanctioned and confirmed by a general Medical Council. It should be one of the duties of the executive Council of the College to inquire into this matter, and to register parties admitted to the fellowship as legally authorised physicians of the United Kingdom. The College of Surgeons might also have an order of fellows, consisting of licentiates of a specified age, who should undergo a special examination in surgery. (Existing members of the College of Surgeons might be admitted to the fellowship on producing certain testimonials of character, professional

and moral, and after the expiration of a given term of years from the dates of their diplomas.) The degree of the Physician, and the fellowship of the College of Physicians, should be open, on examination, to members of the joint Colleges of a given age, who might not, from various causes, have qualified themselves, in the first instance, for this branch of the profession. Some such provision is made in clause 16 of Sir James Graham's Bill (the age of 40 years is surely later than necessary.) Physicians, surgeons, and general practitioners, would thus be huddled together as fellows or members of the same institutions*.

With respect to the government of the Colleges: they should each have a Council, elected by members of a certain standing, and by fellows conjointly. The Councils should consist entirely of fellows; and to this arrangement the members could hardly object; they would have an ample share in the election of the Councils, which would be responsible to them as well as to the fellows: the fellowship would be open to all: every fellow must have been a licentiate of medicine and surgery; many would also have been members of the Colleges; and with an independent Examining Board for licentiates, the authority of the Councils, so far as members were concerned, would be very limited.

In opposition to the foregoing suggestions, it may be alleged, that according to the plan therein proposed, the College in Pall Mall would be no longer a College of *Physicians*. My answer is: it would be as much, and more so, then, than it is at present, as it would comprise all the qualified physicians in England. What, at this moment, is the general practitioner? He is usually a member of the College of Surgeons; and whether so or not, he calls himself a surgeon, although, for once that he acts in that capacity, he acts a dozen times and more as a physician. Even the so-called pure

* Licentiates intending to become candidates for the fellowship of either College would not be compelled to enter the class of associates or members of the joint Colleges. There should, however, be a reciprocity between the fellows of one and those of the other, so far as related to their admission to libraries, museums, lectures, &c. They would all be attached to one national body, and on that account would be entitled to benefit by both the institutions of which that body was composed.

* For the sake of convenience, the Colleges are spoken of throughout this letter as separate institutions, although they would, agreeably with the plan suggested, form departments of one National Establishment, in the same way as two or more Colleges constitute a University.

surgeons have more medical than surgical practice. The College of Physicians is empowered by its charters to preside over surgery as well as medicine, and might, therefore, with great consistency, be made an element in the incorporation of a class of persons who, with a large proportion of medical, combine a comparatively small proportion of surgical practice. The general practitioners, if attached to one College only, would, for the reasons stated, be most appropriately placed in connection with the College of Physicians; but their practice partaking of both medicine and surgery (midwifery being a sort of neutral ground), they should be associated with each College, or (to express it otherwise) with each division of the bi-partite National College. It was a most unfortunate blunder in the above-named institutions ever to let them fall into the hands of the City Guild of Apothecaries.

Fellows of the Colleges might not like to associate with men who practise pharmacy. Those who should keep retail shops should not be recognized as members of either College. No law could perhaps prevent them from becoming shopkeepers; but, thus circumstanced, they should be satisfied to remain licentiates of medicine and surgery. If, after being admitted a member of the Colleges, any licentiate should open a shop, his name should be erased from the list, and he should be required to forego the privilege of membership. Becoming a tradesman for the sake of greater profit, he should be contented with a less amount of dignity. The preparation of his own prescriptions, and those of practitioners attending in consultation with him, is a custom which, for several reasons, the general practitioner could not suddenly relinquish; it is, however, one which is diminishing, and will be more and more abandoned, under the ever-increasing scientific attainments of the profession, the abolition of long apprenticeships, and of unqualified assistants—that wretched set of beings, who work for less than a menial's wages, and are too often found wandering the earth in a state of mendicancy.

The Colleges should have the power to expel both fellows and members who should be guilty of dishonourable conduct. This would afford one way of discountenancing and punishing the

grosser kinds of quackery within the profession.

If it were thought desirable, the fellows and members of the Colleges might, at intervals, have their separate meetings, for the consideration of matters appertaining to their peculiar interests; but the libraries, museums, lectures, and scientific meetings, should be open to all. Does any inconvenience or disadvantage arise from such an admixture of parties in the Royal Medico-Chirurgical Society? (Had such an arrangement prevailed in bygone years, the last-named body would never have been called into existence.) As provincial fellows and members would derive a less amount of benefit from the scientific establishments of the Colleges, their admission fees should be smaller than those of their metropolitan brethren.

At the head of the profession there should be a *Board of Control* or *GENERAL COUNCIL*, (the Council of Health and Medical Education of Sir James Graham). The *Representative* members* of this Council should be chosen in equal proportions by Fellows of the College of Physicians, Fellows of the College of Surgeons, and members of the joint Colleges, or I should rather say, by constituencies formed out of these several orders; universal suffrage would be quite unnecessary. Each class of practitioners would thus have an equal voice in the governing body of the profession. The various duties which would devolve on the General Council are specified in the Bill of Sir James Graham; amongst the most important relating to the profession would be the promotion of uniformity in the qualifications of all classes of practitioners throughout the United Kingdom, the visitation of Schools and Colleges, the superintendence of examining boards, registration of qualified persons, &c. &c.

The Board for the examination of candidates for the license to practise might be appointed by the General Council, the Colleges having the privilege of recommending persons proper for the office of Examiners. The latter should receive fixed salaries. The ex-

* I use the word "representative" to distinguish members of the Council elected by the profession from those who might be appointed by the crown.

amination fees might be paid to the Treasurer of the General Council.

I have treated the subjects of Incorporation and Examination with reference principally to English institutions. The same arrangements (slightly modified perhaps,) might be adopted in Scotland and Ireland. The Colleges of Physicians and Surgeons of Edinburgh, Glasgow, and Dublin, would, like those of London, be constituent parts of the National Institution. (Would the term University of Medicine be admissible?) Uniformity of qualification for degrees and licenses, if established through the medium of the General Council, should be attended by reciprocal privileges throughout the three countries. The physician, surgeon, or general practitioner, qualified in one, should be at liberty to pursue his vocation in either of the others.

In reference to the Councils of the Colleges and the representative members of the General Council, it may be said, that agreeably with the above plan, too large a number of persons would probably take part in their election. Little apprehension need be entertained on this point. I have ventured to suggest that the electors should constitute a part only of the profession, and of this part a large proportion would never vote. Men are often contented to have a privilege, without caring to exercise it. If we look around at the various literary and scientific societies scattered over the kingdom, we shall find that but an inconsiderable proportion of their members trouble themselves to vote in the election of officers, although residing within a limited circle. How many of the newly made Fellows of the College of Surgeons voted a few months ago in the election of the three additional members of the Council, although they then met for the first time, to use their recently acquired privilege? Not one-fourth. Voting papers might be given to those only who should express a wish to have them. The names of persons proposed should be given at the same time, and still further to prevent confusion, every candidate might be required to be nominated by a given number of electors.

A writer in the "Quarterly Review," (January 1845) informs the readers of that journal, that some of the speakers

at public meetings held to discuss the Bill of Sir J. Graham, are bent on having a sort of parliament, elected by 20,000 or 30,000 practitioners. The number of persons who advocate such a scheme must be very small; the bulk of the profession make no such demand, although there are few practitioners who do not think that the ruling bodies of the profession, should in some way, be made responsible to the members thereof; and this opinion is surely justified both by reason and experience. The little interest the corporations have displayed in the general welfare of the profession, or in anything but what has appeared to concern the favoured few, whom they have considered themselves at liberty to regard as the sole objects of their superintendence, affords a sufficient explanation of the demand for representative forms of government. The College of Physicians—a much reformed institution within the last few years—was originally endowed with extensive powers over the practice of medicine, surgery, and pharmacy.* It had, however, up to a recent period, so far departed from the intentions of its founders, as to become little more than a club for those metropolitan physicians who were fortunate enough to be Fellows of the College. The Licentiates were treated with indifference, if not with contempt, and as for other departments of the profession, they were quite beneath the notice of this very exclusive establishment. The College of Surgeons is declared by its Council to be a purely surgical institution. Its members are probably not fewer than 10,000. Of these not more than 200, if so many, practise as pure surgeons—or profess so to practise: some having nothing to do, and those who have employment, dabbling a little in physic in addition to their surgical business. In the year ending June 1844, the sum of £9,486 was paid to the Court of Examiners; it would be interesting to know how much of this came from the pockets of persons intending to confine themselves to the practice of surgery. The funds for the enlargement—I might almost say, the

* The censors have authority to visit and inspect the shops and *materia medica* of druggists. In the year 1811, a report was published by the College, wherein it was recommended that they should examine and license the chemists and druggists of England and Wales.

re-building of the College, the maintenance of the Hunterian museum, library, lectures, &c., the salaries of examiners, Council, and other officers and servants, have been and are derived almost entirely from its members, who have no control over an establishment, to whose splendour and importance they have so largely contributed. In the constitution of the Council of Health, as laid down in the Bill of Sir James Graham, the general practitioners discover a similar exclusion of their body. The Quarterly Reviewer observes, in reference to this subject, "The general practitioners will complain that no certain provision is made for them to be represented in the Council, although there are some points connected with their part of the profession which the Colleges of Physicians and Surgeons may not sufficiently understand; and we cannot but assent to the justice of this complaint." The Reviewer thinks it not improbable that parliament will settle this point by vesting in the Crown the entire appointment of the Council, the bill merely specifying of what classes of persons it shall be composed. Provided all classes be equally specified, this alteration would be an improvement on the Bill as it now stands. It is possible that the Crown might make a better selection than the profession itself, divided and conflicting as are now its component parts; but as a general principle this is hardly to be expected. Amid the fluctuations of political parties, and the changes of governments, it is not to be supposed that we shall have a succession of Home Secretaries who will be sufficiently conversant with medical affairs to form the most accurate judgment of the qualifications required by the members of a Medical Council. They would have to apply for information somewhere, and would not the members of such a Council be more likely to meet with the confidence of the public as well as of the profession, if their fitness were attested by a considerable body of their brethren, than if their appointments were made at the instigation of perhaps two or three private individuals whom the minister might consult, and who would be in nowise responsible for the advice they might tender? The sole object of the profession is to procure the most efficient

system of government within its reach. No human institutions are perfect; they are all more or less defective and liable to abuse. In looking back on the history of those connected with the medical profession, a great majority of its members have arrived at the conclusion that most of their defects and abuses have arisen from the circumstance of their executive councils not having been made sufficiently responsible for their acts.

Some such mode of organizing the profession as I have endeavoured to sketch would present many advantages, and would realize several objects which medical reformers have been, for a series of years, endeavouring to obtain. It would unite and consolidate the profession, preserve the unity of medicine and surgery, ensure uniformity of qualification, and provide a representative and responsible government both in the corporations and the supreme Council. It would secure to general practitioners, as well as to physicians and surgeons, all the benefits they could expect to derive from incorporation; for, after all, it is uniformity of qualification and protection that the profession is most in need of. It may be objected, that according to such a plan, the general practitioners would occupy an inferior position; but would a separate incorporation of their body alter the case in this respect? Constituted as the profession is in this country, would not the new College be regarded as third in rank as well as in date? The position of the general practitioners would be an honourable and respectable one, and if the physicians and surgeons were placed a little above them, they would be so placed on just and equitable grounds. They would all, in the first instance, be licentiates, many of them would be members of the joint Colleges, and they would hold the fellowship at a later age, and after an examination superadded to that required for the primary grade. There would be no invidious distinctions, no exclusiveness. The fellowship would be open to all who chose to aspire to it, and it is not improbable that in process of time a vast majority of practitioners would, sooner or later in life, become fellows of one or other College. There would, moreover, be no arbitrary limitations on practice; it would not follow that,

because the general practitioner should take a degree in medicine, he should resign the practice of surgery or of midwifery, if disposed to continue them, although etiquette, if not compulsion, should oblige him to relinquish all connection with pharmacy. Whatever advantages might attend the establishment of a third College, it can hardly be denied that such an institution would keep up and perpetuate divisions and separations of medical practitioners which have for years been productive of most unfavourable consequences. It could not, for a very long period at least, be expected to stand on a level with existing Colleges, in the records of which are to be found the names of so many illustrious individuals. Under the new and yet to be amended charters of those Colleges, many of the ablest general practitioners would be continually drafted into those institutions, and so far as the examination of general practitioners by men of their own grade is concerned (a point much insisted on) I would humbly submit that a board of examiners composed entirely of this class would be objectionable. If they should hereafter be incorporated with authority to examine candidates for their grade of the profession, the general practitioners would, I doubt not, find it expedient or necessary to have a mixed board like that which has been recommended for licentiates in medicine and surgery. These opinions, formed after much reflection, I submit with diffidence, and with no determination to adhere to them if further reflection should prove them to be untenable. They do not, in my own mind, constitute insuperable objections to a third College; on the contrary, I would say that if the Colleges of Physicians and Surgeons be unwilling to acquiesce in some arrangement whereby the general practitioners shall be associated with those institutions on conditions both honourable and advantageous to them as a body constituting the mass of the profession; if the Colleges prefer adhering to their present policy of alienating this important class; then I cannot see on what ground they can oppose, or should be allowed to prevent, the grant of a royal charter of incorporation for general practitioners. It would be neither just nor decent in

the Colleges to divide between themselves the examination-fees of general practitioners, if all connection between the two parties were to cease on the payment of those fees.

Respecting the second main defect of Sir James Graham's Bill—absence of protection—there is, save in the minds of a comparatively few persons, but one opinion throughout the length and breadth of the land, viz. that to remove restrictions on medical and surgical practice would be most dangerous to the public, and alike injurious to the welfare, respectability, and usefulness of the profession. Such is the language of every meeting that has been held to consider the bill—from Devonport to Newcastle, from Liverpool to Dover.

Unauthorised practice may be considered under two heads: 1. Quackery. 2. Irregular practice. The first species no man (not even my friend Dr. Cowan) expects to *annihilate* by Act of Parliament; but most men think it may be very materially diminished and controlled by legal intervention. According to the Quarterly Reviewer, the profession demands that "the whole race of quacks and unlicensed practitioners should be dealt with in a summary manner," and that "they will be contented with nothing short of this." The writer must be under a misapprehension, or he is unacquainted with the state of professional feeling, or has not had an opportunity of ascertaining correctly what has been going on throughout the profession during the last five months: at all, or nearly all, of the aforesaid meetings, as well as in the various written or printed critiques of the Bill, it has been acknowledged that quackery is not to be extinguished by any law, how stringent soever it might be; but surely such an admission forms no argument against an attempt to counteract its baneful effects. Laws and penalties have never proved, and probably never will prove, equal to the suppression of crimes and offences; but the legislature is not, on that account, absolved from the duty of protecting the public against them, so far as this can be accomplished by appropriate legal enactments. Quackery is a very sweeping and comprehensive term: it includes many absurdities which no law could recognize, and the interference with which would subject

the complainant to ridicule instead of redress. Those persons who have a taste for empiricism, who think "the pleasure is as great of being cheated as to cheat," would, even in the face of penalties, have abundant opportunity of gratifying their morbid inclinations. There will always be a large amount and many kinds of quackery, against which no law would ever be directed, although the dread that on some occasion or other the quack might be called to account would act as a powerful check on his proceedings, and would unquestionably prevent a great deal of the fraud, cruelty, and mischief, of which quackery is the parent. The quack would have to pursue his avocation in a much less ostentatious manner than he is now permitted to do, and if the publicity of his pretensions were curtailed, his main prop and dependence would be, in a corresponding ratio, taken from him. The Reviewer advances, among other reasons for letting quackery alone, that there is much of it within as well as without the ranks of those "who march under the banners of the true faith;" and he brings forward the instance of certain medical students (their number he hopes is not great), who, having for years neglected their studies, and spent their time in idleness or profligacy, are eventually prepared for their examinations by a three months' process of "grinding" or "craming." That such cases do occur, and not infrequently, no one at all conversant with the habits of medical students can deny: but does their occurrence constitute an argument against quackery? Few, I imagine, will think so, although many will be apt to consider it as forming a very powerful argument against, and condemnation of, the present system of medical education, and the manner in which the examining and licensing boards fulfil their duties. Why do they permit such persons to enter into practice stamped with their certificates of qualification? Why do they not devise some unequivocal method of ascertaining that candidates for their diplomas, &c. have actually studied their profession, and been repeatedly examined by their own teachers, before submitting themselves to that final ordeal which, if successfully passed, enables them to go forth to the world as duly accredited practitioners of medi-

cine and surgery. Reprehensible as are the preparation and examination spoken of by the Reviewer, the case would be still worse if the student were permitted to assume the function of the practitioner without either one or the other. Under a proper system of medical government and protection, such abominations would be no longer heard of. It is much to be lamented that medical men should ever seek to promote their success by unworthy means, or that they should at any time be found advocating so many of the fooleries and quackeries of the day. Their more honest brethren cannot too strongly discountenance such discreditable characters. The moral influence of the former may do much, but the Reviewer may feel assured, that internal quackery will be most thoroughly discouraged, and that honourable feelings and conduct will be most effectually promoted, by the adoption of such a system as shall induce well-educated men to enter the profession, and shall protect, as far as possible, those who are willing to incur the expense and anxiety of a sound and liberal medical education from being placed in unfair competition with men whose dishonesty and baseness are generally proportioned to their ignorance and want of refinement. The Reviewer fortifies himself with the opinions on quackery promulgated by the Colleges of Physicians and Surgeons of Edinburgh, and he moreover gives his readers the probable ground of those opinions, when he says, in regard to Scotland, "Quackery is comparatively unknown in this part of the United Kingdom."

There is not, we may readily conceive, the same scope for quackery in Scotland as there is in England. "Sawney" is a more cautious, discreet, meditative person, than his brother, "John Bull." He takes better care of himself and of his money, and has less of the latter to throw away—even in the luxury of being cheated. The gullibility of poor John is notorious. We must bear in mind, however, that Colleges do not always accurately represent the opinions of their individual members. To what extent this may be done by those in question, I cannot presume to say, but we find the Glasgow Medical Association taking quite an opposite view of the matter, and I am not aware that Scotch gentlemen prac-

tising south of the Tweed are less exposed to restraints on quackery than are their English brethren.

What may be termed irregular medical practice would be a practice under the control of a penal enactment than that species of impost to which the term quackery is usually applied. The irregular medical practitioner I would describe as the man who, with some degree of medical knowledge, but one licensed, and without a license, assumes the functions and external guise of the regular and fully qualified member of the profession. He is not exactly a quack, inasmuch as he professes to be guided in his practice by those principles which have been received and acted upon by the legitimate professors of the profession. It may be said, it would be difficult to give a legal definition of such persons, and that any clause of an Act of Parliament, framed with that intention, would be easily evaded. I do not think the author of a Medical Bill need trouble himself with an attempt to lay down with mathematical precision the line of demarcation between the true and the spurious practitioner. Let the law provide that any person who shall undertake, without a license, the treatment of diseases or bodily injuries or in any manner act in the capacity of a medical or surgical attendant on the sick, with a view to pecuniary gain, shall be subjected to fine or imprisonment on conviction before a bench of magistrates. The latter would have little difficulty in deciding who were, and who were not, acting as regularly qualified medical men. Parties dissatisfied with their decision should have a power of appeal to a superior court.

"Inferior druggists," says the Quarterly Reviewer, "excite the jealous of Medical Associations." If this assertion is to be understood as applying to the counter practice of those persons, the Associations will probably differ from the writer. Such practice cannot be prevented, and if it could, would the profession be benefitted by its transference to themselves? But under the proposed Bill druggists would not be limited to their counters; they would be at liberty to visit patients, to treat medical and surgical cases, and, I mistake not the meaning of clause 1, they might commence practice with

the title of "Doctor" appended to their names, and a German diploma placed within sight of their admiring customers. The Reviewer seems to think that the increased qualification of medical men must be attended with a corresponding increase in their charges. They are now perhaps as much employed by the working classes and the poor as they ever have been, and as for the Doctor's bill, it matters little, in the majority of cases, amongst these classes, whether it be large or small—it is never paid. So far as the medical man's interests are concerned, the druggists would be welcome to such practice. (The subject of an improved system of medical attendance on the labouring population is one of great importance, but into its details I must not enter more fully at the present moment.)

The irregular practitioner, far more than the quack, is the person whom the qualified man is interested in putting down. His pretensions, unlike those of quackery, are liable to be confounded with the hard-earned qualifications of the regular profession, and it might easily be shown, that the public welfare would suffer from the tolerance, or, in other words, the tacit recognition, of such a class. The true man would be continually driven out of the field by the pretender. He could not resort to the same unworthy means of procuring notoriety and worldly success as the latter would be almost sure to call to his aid. Whatever might be the result of a penal enactment (no fair trial of which has yet been made in this country), it would at least testify the desire of the legislature to preserve the health and lives of the people (who will ever be inadequate judges of medical and surgical skill), while its absence may create the belief that the sciences of medicine and surgery are so imperfect, their professors so little to be relied on, that Parliament has deemed it advisable to throw open the practice thereof to all who care to undertake their perils, or to share their profits.

The Reviewer thinks the corporations are often blamed for the discontent existing in the profession, and which should rather be referred to something in the society leading to an inordinate seeking of our ranks. This is a mistake. Many young students of medicine

idea of the emoluments of medical practice. They flatter themselves with the idea that it will secure to them a handsome and speedy livelihood, and that no great capital will be required at starting. Many fond parents are also "daft" enough to suppose that to put their sons into a *profession* is the right way to make them "gentlemen." The corporations are not, however, quite guiltless on this point. Uncontrolled and irresponsible, they have admitted many, many persons, to practise, who have been sadly deficient in professional attainments, and still more so in preliminary education, and who would have been more usefully and more happily placed in some other walk of life. The Quarterly Review, of Jan. 1841, admits that corporations, like individuals, are apt to become avaricious.

The Reviewer so often referred to declares that the profession are not agreed on what should constitute medical reform, except in one point, viz. "deliverance from quack competition." In making this statement he is clearly misinformed. The profession are agreed on many points; and more than this, there is amongst them a great degree of unanimity in relation to Sir James Graham's Bill. The *principles* on which that measure is based have been generally approved; its defects arise from the too limited extent to which those principles have been carried out: the principle of representation, for example, has been recognized in the Council of Health, so far as regards physicians and surgeons, but it has stopped short of the general practitioner. The principle of protection, so far as the *public* practice of the profession is concerned, is also observable, and if the same solicitude had been evinced towards other portions of the community, as the Bill has displayed on behalf of hospital patients, soldiers and sailors, prisoners and paupers, there would have been no room for complaint under the head of protection. Several provisions of the Bill have met with very general commendation. Let us, then, hope that Sir James Graham will reconsider those points on which there is a difference of opinion between himself and the majority of the profession, and so amend the Bill before bringing it again into the House of Commons, as to render it a measure of real and lasting utility to the public, and not in name only, but in deed, a "Bill for the better re-

gulation of Medical Practice throughout the United Kingdom."

I have the honour to be, sir,

Your obedient servant,

CHARLES T. CARTER,

Honorary Member (late Secretary) of the North of England Medical Association.

Adley, Middlesex, Jan. 29, 1845.

ANALYSES AND NOTICES OF BOOKS.

"l'auteur se tue à allonger ce que le lecteur s tue à abréger."—D'ALEMBERT.

Of the Nature and Treatment of some of the more important Diseases, Medical and Surgical, including the Principal Diseases of the Eye. By JOHN CHARLES HALL, M.D. of East Bedford. 2d Edition, enlarged.

In the work before us a variety of subjects are discussed, viz. diseases of the eye, fistula, fractures of the cranium, hsem, bronchocele, cancer, suppression of urine, uterine hæmorrhage, gout, and rheumatism. Many of the chapters, the author informs us, are founded on cases sent from time to time to the MEDICAL GAZETTE. The principal attention in the present volume consists in some additions to the section on diet and disorders of digestion, and the introduction of a chapter devoted to an examination of the utility of nitrate of silver as a local application in erysipelas, in which an endeavour has been made to collect the opinions of all writers of authority on the matter, as well as the hitherto unpublished results that have followed its employment in the practice of many distinguished surgeons.

The following hints are apposite in reference to dyspepsia:—

States of mind, and habits of body, such as mental trial, mental distress and solicitude, much study, want of exercise, exert a marked sway over the functions of the digestive organs; hence or task is the most difficult when the patient's anxiety relates to his own complaints; when the mind dwells only on his state of health, and he continually tells you his recovery is hopeless. If you say to him his ailments are imaginary, laughs in your face, deserts you, and places himself under the care of some abominable quack, who fleeces his pocket, and ruins his health, by the continued use of purgatives, the injurious effects of which I have already pointed out. We can obtain the confidence of such

a one, much is already gained; get him to "*travel in search of health*," for a time to forget his business—to forget himself; keep the mind ever engaged, and the eye ever resting upon some new scene: thus, six weeks spent among the mountains of Switzerland, or upon the rivers of Germany, or in travelling through any pleasant part of our lovely island, will often do more in bringing the dyspeptic hypochondriac to a state of health, than an eternity of physicing and dieting at home: 'you cannot minister to a mind diseased: throw physic to the dogs!'"

The author very properly condemns a constant and indiscriminate use of purgatives in the treatment of dyspeptics. He says, "The imagination of the sufferer solicits a temporary respite from pain by strong purgatives at the risk of future health and comfort. There is not a symptom of the disorder which is not rendered more severe by the evil practice of continued purging, either directly, by irritation of the alimentary canal, and disturbance of the natural course of its functions; or indirectly, by morbid influence on the mind of the patient, a result no less injurious than the former."

As an antacid, Dr. Hall approves the combination of bicarbonate of potash with nitre, as recommended by Dr. Prout, although he does not pretend to explain its *modus operandi*. He advises this remedy to be persevered in, until, with the assistance of proper medicines and diet, the disease is subdued, and the distressing secondary effects of acidity in the *primæ viæ* prevented; for alkaline remedies alone are useless in removing acidity, they only neutralize the acidity when formed, and if taken in too large doses, and at improper times, add to the disease by causing an absolute increase of acid. Bitters, he justly observes, are, like purgatives, resorted to far too much. We have, in our own practice, witnessed decided advantage in such cases from counteracting lactic fermentation by the aid of astringents; such as extract of uva ursi, gallic acid, and the like. These substances not only check this morbid disposition, but likewise impart tone to the stomach. When the acidity is confined to the large intestines, the author considers it useless to employ the soluble antacids, "they are rendered valueless long before they reach the seat of the affection — magnesia will therefore be found

more advantageous in such cases. The best and shortest plan, however, is the injection of a little warm soap and water, which at once removes the offending cause."—p. 229.

In the concluding chapter on the use of nitrate of silver in erysipelas, Dr. Hall verifies the old adage, *quot homines tot sententiæ*. Subjoined is the result of his own experience: "I have so often seen the nitrate of silver employed, and so often employed it myself with the most decided benefit, that I am at a loss to account for the fatal results that have followed its application in other hands. Eighteen months ago I attended a nobleman (in consultation with my esteemed friend, Dr. Schofield, of Doncaster,) who was suffering from a severe attack of erysipelas of the face; I applied the nitrate of silver freely; the result was highly satisfactory and the patient recovered; so did three other similar cases within a month of the same period, and both before and since I have used it, *not certainly with the same success as Mr. Higginbottom*, but it has never in my hands done harm, and has proved quite as successful as any other remedy with which I am acquainted. *Now it must be distinctly understood that lunar-caustic does not repel erysipelas*, but by its application the violence of the disease is moderated and localized; it must also be remembered that the local affection, whatever part of the body it may attack, becomes a secondary cause of disease, and undoubtedly keeps up the original constitutional disturbance, in exact proportion to the extent and severity of the local disease; it appears then clear that it is of the greatest importance, not only to endeavour to correct the errors in the system, but also to limit the local disease."

MEDICAL GAZETTE.

Friday, February 7, 1845.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

MEANS OF PROTECTION.

WHILE going to press last week, we were favoured with a note from the Provisional Committee of the Association of General Practitioners, intimating

that a copy of certain communications with the Home Office would be open for our inspection. It appears that a memorial had been addressed to Sir James Graham, with the view of inducing that Minister to advise Her Majesty to incorporate the general practitioners by "charter into an independent college, with a governing council and power to frame by-laws, and provide for the future education of the general practitioner, and to place them, as respects the management of their own affairs, in every respect on a footing of equality with the existing Colleges of Physicians and Surgeons."

Sir James Graham, falling back upon his recent correspondence with the Master of the Society of Apothecaries, plainly informs the memorialists, that they have not sufficiently complied with the conditions laid down for their guidance in an affair of such importance.

"The names appended to it, although of great respectability and deserving of high consideration, belong exclusively to metropolitan practitioners, and the subscribers do not profess to have any authority to represent the wishes of their provincial brethren. The memorial neither explains the proposed organization of the intended corporation, nor furnishes the names of those to whom the charter is to be granted, who, as is usual in such cases, would be named as the first office-bearers in the corporation."

The Secretary of the Home Department cannot fail to notice that numerous petitions have been forwarded to Parliament by highly respectable bodies of the profession throughout the provinces, praying for alterations and amendments in the the proposed Bill, without the most distant allusion to the scheme of incorporation. The grand move has been chiefly confined

to London and the suburbs. He therefore very judiciously tells the memorialists, if you can "satisfy me that the expressed wish of your association is felt also by a large number of country practitioners, I shall examine the draught of your proposed charter with every disposition to promote the usefulness and respectability of the important branch of the profession to which you belong."

No Minister of State could have penned a more fitting letter for the occasion.

We have all along considered the project as one of a most questionable nature, so far as the present interests and future prospects of the general practitioners are concerned. On no other ground would we urge against it the slightest shadow of objection. We believe that, so far from being aggrandized, they would eventually be lowered by this much-coveted boon. They would take rank as a third estate, and be viewed pretty much in the same light as the *officiers de santé* are in France; and as no one branch can suffer without the others being reciprocally affected, the sequel would be a debasement of the whole mass. The measure, moreover, is intrinsically schismatic, and consequently calculated rather to augment than abate the discontent and dissension which unhappily have so long divided the body medical. Physic, as an art, is one; why, then, should such divers denominations be formed and perpetuated?

The general practitioners lay evident stress upon the circumstance, that their class has been created "by the customs and necessities of the community;" but have not the throng of chemists and druggists been likewise created by the customs and necessities of the community? The argument thus cuts both ways.

The main principle, never to be lost sight of by the legislature, is the pro-

tection of the public. That should on no account be entrusted to any corporation having power without virtual responsibility, as heretofore the case. We therefore repeat, what we formerly inculcated, that the most salutary course would be insured by means of a clause, enacting that all men henceforth to receive any license whatsoever to practise in the healing art, should first prove, before competent tribunals, to be appointed for each of the three kingdoms, and by proper and adequate tests, their possessing a certain standard of medical and other knowledge; and that all holders of any professional title thus conferred, should enjoy in each of the three kingdoms all privileges and immunities as qualified practitioners. Let the examiners be quite independent of all existing corporations, and have no other object but the selection of fit men as guardians of the public health. Let a general registry of all licensed practitioners be enforced annually, at a uniform moderate fee, and let wilful omission of such registry be visited by certain pains and penalties: say suspension or withdrawal of the license. Let all persons simulating a medical title or grade which does not belong to them, or convicted of practising without certificate, be made liable to summary punishment, the power in such case to be exercised by a magistrate or by two magistrates. It is universally admitted that the law as it now stands has signally failed of attaining the contemplated end. Indeed, the right of prosecuting has been a great disadvantage to, and thrown much obloquy upon, the Society of Apothecaries; because it has been wielded on selfish grounds, and wholly irrespective of the public interests, to coerce not gross incompetence, but technical disqualification. Let medical men be entitled by law to receive fees for their visits, and charge a mere equivalent for what medicines they may

require to furnish in rural districts. We object to any contumelious distinction into persons charging only for the exercise of their skill, and into those who should make a trade of practice by charging for the drugs they send in. There is no chance of melioration until the practice of medicine and surgery is kept totally separate from that of pharmacy.

It is high time for apprenticeships to be abolished. The thralldom and mispent time incidental to such a system must inevitably tend to exert a demoralizing influence upon youth. By lessening, moreover, the expense of education, it merely tends to increase the multitude of young men annually flocking into a profession which is both overstocked and impoverished. Each individual underbidding his neighbour, doomed perchance to eke out a miserable livelihood by petty traffic in drugs, of which he knows little more than the external characters. The institution of long apprenticeships, says Adam Smith, has no tendency to form young people to industry. "An apprentice is likely to be idle, and almost always is so, because he has no immediate interest to be otherwise*." Why, indeed, should a public law, meant exclusively for trades carried on in market towns, by the 5th of Elizabeth, and commonly called the Statute of Apprenticeship, have ever been foisted upon a liberal art? We can recognize no other motive save that of pecuniary gain—the receipt of a fee, and the prospect of engaging the services of an assistant at a cheap rate. We maintain, that in the course of a very few months, any lad of moderate capacity may master the necessary manipulations, which he is now compelled to dawdle over during five of the most precious years of his life.

We are glad to perceive that Sir James

* Wealth of Nations, Book I. Chap. 10.

Graham is to bring forward his motion for leave to bring in the Bill, on Tuesday week. It is the intention of the Rt. Hon. Baronet to propose some alterations in the measure of last year. These are to be duly stated, together with the grounds on which they are based, at the time above specified. From what we hear, there is a strong feeling on both sides of the House in favour of an amended Bill. We are led to anticipate that the enlightened statesman, who has been at so much pains to investigate the matter, will introduce such modifications as shall satisfy every reasonable member of the profession.

In conclusion, we invite the attention of our readers to an elaborate paper in the present number of the *GAZETTE*, by Mr. Carter, in which certain views we have been advocating are very clearly put.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Tuesday, January 28th, 1845.

MR. STANLEY, President, in the Chair.

Brief Notices of the Variolous Epidemic of 1844. By GEORGE GREGORY, M.D. Physician to the Small-pox and Vaccination Hospital.

AFTER noticing the remarkable freedom from small-pox which the metropolis enjoyed during the years 1842 and 1843, the author adverted to the rise of the present epidemic, which he dates from the 21st March, 1844, when the weekly deaths by small-pox suddenly rose from twenty to thirty, and have continued (with some irregularities) progressing from that period to the present.

The admissions into the Small-pox Hospital, in 1844, amounted to 647, exceeding by one the admissions in the great epidemic of 1781, and being, with the exception of 1838 (when the epidemic raged throughout the entire year), the greatest number ever received into the hospital since its foundation in 1746.

The character of the disease was severe. The deaths amounted to 151, being at the rate of $23\frac{1}{2}$ per cent. In 1781, when the same number of patients were admitted, the deaths were 257, being at the rate of 49 per cent.

Of the total admitted, 312 were reported

to have been vaccinated, and had cognizable cicatrices; 22 professed to have been vaccinated, but no scars were detected; two alleged, but on very unsatisfactory grounds, that they had been inoculated for small-pox in early life. Among the 312 vaccinated, more than 100 had the disease in the very mild form usually called the varioloid; in a certain number no mitigation was observed. Of the whole number, 21 died, being at the rate of nearly 8 per cent. on this section of admissions*.

A remarkable feature in the history of the past year was the increasing desire on the part of the public for revaccination.

Founding his views on the now indisputable fact, that small-pox spreads as widely *without* as with accompanying inoculation, and on the now equally established fact, that small-pox after vaccination proves fatal at the rate of 7 per cent., while inoculated small-pox is fatal only at the rate of one-fifth, or 1 in 500, the author proceeded to argue that it is unwise to prevent variolous inoculation *in toto*. Persons verging on puberty might, he said, with great prospect of advantage, be inoculated *after vaccination in early life*. If, as happened in the case of his own son, the inoculation failed to produce constitutional symptoms, the permanent security of the party was fully established; on the other hand, if febrile symptoms followed, the disease would probably be mild, and, at all events, would be undergone under the watchful eye and care of parents. As it is, the disease is often received at a period of life the most distressing, as by young women on the eve of marriage, by mothers in confinement, or by young men just embarking for India.

The author instanced a variety of other important objects which might be gained by a repeal of that part of the "Vaccination Act" of 1840, which prohibits qualified medical practitioners from inoculating in England and Ireland, and he concluded by recommending to the legislature such a measure, and to the medical profession (when such permission may be granted) the establishment of a system of infantile vaccination, strengthened and made *doubly sure* by adult inoculation. The practice of *inoculation* might usefully be restricted to the period of life extending from the age of 10 to 20.

Dr. Webster eulogized the paper of Dr. Gregory, which contained matter of great interest. It was not his intention to controvert the opinions expressed in the paper, but one inference of importance he drew from it, viz. that the public, whatever the opinion of some might be, had more confidence in the protective power of vaccination

* Many of the cases received during the year displayed features of individual interest. A variety of them were stated in detail.

than formerly. This was evidenced by the greater number of applications for revaccination at the Vaccination Hospital during the past than in any previous year. Had Dr. Gregory seen many cases of small-pox following revaccination? He, Dr. W., felt strongly on the subject, and was most unwilling to doubt the influence of vaccination, if properly performed. To shew its protective power, he mentioned the fact, that small-pox had been lately prevalent in Bethlem Hospital, and that the only person who had fallen a victim to the disease was a lunatic, who had not been vaccinated. He attributed the occurrence of variola in that establishment to its being epidemic in the neighbourhood, and to the prevalence of westerly winds wafting the contagion into the hospital. The proposition of Dr. Gregory to revive the old and illegal practice of inoculation required mature deliberation. He thought that Parliament was not the best tribunal to settle disputed points in medical practice. Cases might occur in which inoculation might be advisable, but the practice should be confined to qualified persons, and great care should be taken to prevent the dissemination of the disease.

Dr. Gregory, in reply to the question of Dr. Webster regarding the power of revaccination, referred to a case, detailed in his paper, of a girl named Eagle, who was vaccinated in infancy, and, at a later period, revaccinated with great care. Small-pox subsequently attacked her, and she was admitted into the Small-pox Hospital. This case was by no means a solitary one. The objection might be urged that neither the vaccination nor the revaccination had been properly performed in this case. He did not agree with Dr. Webster that the small-pox was introduced into Bethlem Hospital in the manner he had described.

Mr. Davis (Hampstead) said that he received directions to inoculate the whole of a regiment of soldiers under his care, at Bristol, in 1798. Two of the men had been employed in dairy farms in Gloucestershire, and said they had been vaccinated, and it was of no use to inoculate them. They were inoculated, however, but without any effect. One of the men, indeed, was inoculated thirteen times, and of his own accord slept with others suffering from small-pox, without taking the disease. This was before Jenner had investigated the subject, and made it publicly known. He said that he had vaccinated a baby successfully while its mother had the small-pox; and, although the mother died of the disease, and the infant took the breast as long as there was milk, it remained unaffected. Once, whilst practising in the country, he was requested by the parents to vaccinate part of a family from a particular arm, but he was not satisfied with the ap-

pearance of the vesicles, and refused. In spite of his remonstrances, however, the children were vaccinated from that arm by another practitioner, and when the small-pox was prevalent, he wrote to his successor to make inquiries concerning these children, and learnt that those who were vaccinated from that arm which he had refused took the disease, whilst the others did not. He considered that want of care in the selection of lymph was a common cause of vaccination failing to be a perfect protection against small-pox.

Dr. Macaulan asked Dr. Gregory if he was aware whether any difficulty had been experienced in countries where inoculation was not prohibited in arresting the progress of small-pox?

Dr. Gregory replied that such difficulties had occurred both in Europe and in India. In Naples, particularly, this was the case, and with the view of meeting these difficulties the Neapolitan government had decided on the plan of obtaining fresh matter from the cow, and had at this moment agents in this country to obtain a fresh supply from Gloucestershire, the place where Jenner originally obtained his matter. The same difficulties had been experienced in India, and a volume which he held in his hand gave an account of the late epidemic, and the means taken to arrest it. As the volume had probably not been seen by any of the members, he would read some extracts from it.

"Reviewing the whole history of vaccination in Bengal, I fear it must be said that its progress has been slow, that its operations have been but partially successful, and that its present state and prospects are unsatisfactory and discouraging. Neither can it be denied that public opinion has been unsettled regarding its advantages, and public confidence shaken in its efficacy and permanence as an antidote to small pox—a feeling which is not confined to the common people, but prevails more perceptibly among the better informed and reflecting classes of the community, and is not without participators among the profession itself. Under these circumstances it appears most advisable that a commissioned body of medical men, with a few associates from the general community, should undertake to investigate anew the nature and causes of this state of things in Bengal, and to devise for the consideration of government some new plan, or modification of the present system, which, being founded on definite and established principles, may afford some reasonable hope of greater success. The necessity for such renewed inquiry will be deemed the more urgent when it is observed that, far from diminishing in number, the invasions of small-pox have of late become frequent and

destructive in many towns and provinces of Bengal."

In 1839, Mr. Dalrymple, surgeon, writes as follows:—

"He was sorry to say that there had been too much cause for the mistrust which prevailed respecting the protective power of vaccination, as the number of cases of small-pox among the European officers at Messerabad during the past two years had been probably as great in proportion as among the natives."

Thus writes Mr. Atkinson:—

"So many instances of failure occurring, say two or three, their confidence is shaken or destroyed, for they cannot comprehend or appreciate the value of the chance which even that proportion affords of escape from the small-pox, but disregard the whole, because the result is not absolutely certain. Such appears to be the general feeling on the subject of vaccination among the natives in this quarter."

Mr. Tweedie remarks—"that the natives of India are quite satisfied with the variolous inoculation which has been in use from time immemorial, and they do not see that a preference should be placed on a new European mode that they have found most uncertain."

With respect to the commission, Dr. Gregory thought it would be of service, and might advantageously be resorted to in this country. Impressed with the opinion, he had proposed a commission to Sir James Graham in the month of October, 1844.

Dr. C. J. B. Williams inquired whether the failure of vaccination in India might not be attributable to the injury sustained by the lymph in its transit, and to the influence of climate?

Dr. Gregory replied, that vaccination could only be employed in India eight months in the year, and even during this period there were many difficulties, for the natives did not fail to observe the comparative mortality of small-pox when occurring naturally, and when acquired by inoculation, and the probability of the occurrence of variola subsequent to vaccination.

Looking at the fact that women at a marriageable age were liable, even after vaccination, to the ravages of a disease which might not only deprive them of beauty but of their eye-sight, it became our duty to devise some efficient mode of protection. A combination of inoculation with vaccination was, in his opinion, the best plan to be pursued in India, though not the best, perhaps, in all cases, and he recommended its adoption by the East India Company. Placing inoculation under the superintendence of the government, and restricting its performance to medical men, would be a judicious measure; and, indeed, with some

modifications, would be advantageous in this country.

Dr. Williams had heard nothing to convince him that the arguments with respect to vaccination which were applicable to the natives of India, were equally applicable to the people of this country. He denied the similarity of the cases. In India vaccination was only applicable during a few months in the year, and the prejudice of the natives against it prevented its employment on an extensive scale. The elaborate paper of Dr. Gregory had failed to shake his confidence in the protective power of vaccination; and in reference to revaccination, we were at present without statistical information, to arrive at any conclusion respecting it. Small-pox might occur twice or thrice to the same person, and he had lately heard of an instance, though he did not vouch for its truth, in which it had occurred four times. Now, with reference to the question as to whether vaccination was a sufficient protection against variola, it must be borne in mind, at least such was his opinion, that variola, whether natural or inoculated, and cow-pox, were one and the same disease, differing only in their degree of intensity. The effects would be proportionate to the amount of their morbid power, and it was reasonable to suppose that occasionally the least intense of these might not succeed in so sufficiently pervading the frame as to prevent the occurrence of a future attack. The milder the agent, however, the milder the disease produced; so vaccination produced a mild disease, not liable to spread, whilst inoculation might form a focus for the propagation of natural small-pox.

Mr. Streeter had met with two cases of small-pox in pregnant women, at about the sixth month of pregnancy. They both recovered.

Dr. Gregory had met with such cases on more than one occasion. He did not agree with Dr. Williams respecting the identity of small-pox and vaccinia. Natural and inoculated variola were equally severe, as had been proved by the occurrence of consecutive small-pox after the natural or inoculated disease. There was no more identity between variola and cow-pox than between scarlet fever and measles. He related a case in which the elderly parents of a young lady suffering from small-pox were vaccinated, and though they had both submitted to inoculation in early life, the cow-pox went through its natural course. Vaccination being thus successful at a late period of life, and subsequently to inoculation, affords a strong proof of the non-identity of the two diseases. Many facts might be adduced in support of this non-identity.

Dr. C. J. B. Williams thought Mr. Ceeley's experiments conclusive in favour of the identity of cow-pox and small-pox. The

cases related by Dr. Gregory did not militate against this identity to a greater extent than did the occurrence of small-pox after vaccination.

Dr. Webster regarded the case related by Dr. Gregory in the light of a strong proof of Dr. G.'s faith in vaccination. He attributed the frequent failure of cow-pox in preventing variola, to impurity of the lymph, and the carelessness with which vaccination was occasionally performed.

Dr. Stewart referred to a number of cases which had recently occurred in St. Pancras, in support of the sufficiently protective power of vaccination when properly performed. He confirmed, from ample experience, the statement of Dr. Cowan, that in Glasgow small-pox was perpetuated chiefly by Highlanders who had not been vaccinated. Why should we expect, as M. Chomel had said, "more from vaccination than from small-pox itself," for we know that small-pox might occur twice or thrice, and destroy the individual at last.

Dr. Gregory remarked that as half the children in Liverpool died before puberty, and three out of ten of those now in London never reached adult age, still nearly one-half of the population would be protected by vaccination, even if his (Dr. G.'s) plan were fully carried out.

ELECTION OF FELLOWS OF THE COLLEGE OF SURGEONS.

To the Editor of the Medical Gazette.

SIR,

IT is evident that the Council of the College of Surgeons did not intend to legislate so much for this as for future ages. The general practitioners may be very jealous of the present Fellows, but there are many of the latter who do not feel the fellowship a great boon to them. On the contrary, they feel they have lost rather than gained by it: for instance, those who, from their position in the profession, were almost certain of being elected on the Council, now are not only obliged to undergo a strict scrutiny, but also run the risk of being black-balled, or at least being shown that they have many enemies, which is not, it must be allowed, a very enviable feeling; for we all, no doubt, have enemies, but few of us would like to know it. This can be judged of by the last election—some candidates were black-balled, while those who were admitted into the Council got in only by a small majority. The Fellows, however, have not only this ordeal to undergo, but when they have been successful they are not elected for life; and, as the present Council is constituted, must go out in one or two years, after having paid twenty guineas for their seat. I know

not what profits may attach to the Councilorship, but it appears to me to be paying *very dear* for the honour, and more particularly after having advanced large fees for the diploma.

In future ages, no doubt, it will be more just (and even then a great tax), as the Councilors go out by seniority and rotation, and each Fellow will remain in the Council until his turn to go arrives; but at the present period it appears hard, and not quite a fair regulation. It is true that a Councilor may be re-elected, but the result of such re-election remains to be seen. These observations are not made with any view of complaining of the present Council, because they were originally elected for life, and it is just to them it should remain so; but they are intended to show to the Members that the Fellows have not obtained such great advantages as they imagine, and that those of them who are eligible to the Council have rather lost than gained by the new charter. In the time of the old Council, when once elected, nothing could stir you from it; now, in a certain period, you must leave it, and most probably may never have the chance of being nominated again.

I am, sir,

Your obedient servant,

VERITAS.

Jan. 25, 1845.

IS THE MEDICAL PROFESSION OVER- OR UNDER-STOCKED?

To the Editor of the Medical Gazette.

SIR,

HAVING read Mr. Alfred Taylor's paper on the numerical relation of the medical profession to the population of Great Britain, I think that the thanks of the profession are due to him or any other gentleman who may have time and opportunity to explore these difficult subjects, but I would beg to offer a few remarks respectfully to point out what appears to me an insufficiency in the present amount of data, from which to draw satisfactory general conclusions, and that the prominent statement made of the profession being "overstocked" is not the legitimate conclusion to be drawn from the data already procured. I must put down my thoughts rather in a crude shape, and but briefly, but I am sure, from long observation, that they will be found essentially true, and demonstrated by the present relations of the profession and society at large.

1. I venture to assert that the medical profession is understocked, and that because its remuneration or service is undervalued.

2. To complete the schedule of data upon which to judge accurately, we should have

the average of medical income, and the average of incidental expenses, and these compared too with the relative averages both of the clerical and legal professions. I heard an Inspector of Taxes lately say, that from his experience it required from 30 to 40 per cent. of the gross income to carry on general medical practice.

Another most important datum we want, before we can reason correctly upon this subject, is the average number of persons in the whole population who take medical advice once, or more than once, during the year. If I am not much mistaken, this average will be found much higher than is generally imagined, and if I may make a conjecture (it is but a conjecture) I should say that it is somewhere between one third and a half of the entire population.

If it should be said that the clerical and legal professions have no greater advantages than the medical; I answer, not so. For without entering on the question whether the other two professions are provided for as they ought, it is certain that their public services are far below those of medical men, as well as their respective incidental expenses proportionate to the income. I am not disesteeming the other professions; on the contrary, I think the clerical (not superstitiously viewed) pre-eminently the first; but contrasting the respective amount of laborious and expensive occupation fulfilled towards the public by these three classes, the medical men are entitled to the chief consideration.

It matters not whether the number of medical practitioners be increased, or only the income of the present number enlarged, as in the latter case medical assistants could be more respectably maintained than now; and could assistants be thus adequately supported, the expectation of parents and guardians would not experience that painful disappointment in the professional welfare of their youth, the result of which is the present declension in the number of medical pupils. It may be that the existing medical schools are too many, and possibly might be still too many even if the pupils were greatly increased, but this question does not affect the preceding remarks.

I do not pretend to predict what the end will be of the present agitation in the profession, but I am convinced that any forthcoming change which does not embrace a better provision for the medical profession whatever other good things it may contain, will not so materially improve the profession, as seems expected, nor perhaps do away with the patronage of unlicensed practitioners in some shape. The low remuneration for attendance on the parochial sick seems generally admitted, but can we believe that the salaries for it will be much raised,

if at all? and this circumstance must always involve a large amount of unrequited labour to some part of the profession, and unrequited labour must ever drag along with it natural evils, either to the employer or employed, or both.—I am, sir,

Your obedient servant,

A PRACTITIONER.

Feb. 4, 1845.

DESCRIPTION

OF THE

OPERATION OF LITHOTOMY,

AS PERFORMED BY A NATIVE HAKEEM.

Extracted from the Annual Report of the Sick of the 22d Regiment, N. I. for the year 1842.

By A. ARNOTT, M.D.

[Presented by the Medical Board, May 1843].

HAVING had no occasion to perform any capital surgical operation myself, it may not, *pro hac vice*, be entirely out of place here, though not pertaining to my official charge, to describe an operation for lithotomy performed in my presence by a Native Hakeem on a boy about 11 years of age, who had for some time suffered under the severest symptoms of stone in the bladder. No preparatory course of medicine that I am aware of having been gone through, the first object was to ascertain the existence of the stone, and to bring it down into the neck of the bladder. The Hakeem's assistant took the boy in his arms, and jolted him up and down, allowing him to light on his feet with some violence. He then placed him on the lap of a friend seated on the end of a cot with his arms put under the lower end of the thighs, and his hands held to secure him in this position, which sufficiently exposed the perineum, the limbs being kept separate as much as possible. The assistant compressed the abdomen from above downwards; and the operator having introduced the fore and middle fingers of his left hand, previously well oiled, into the rectum, seized the stone, and made it protrude as much as possible in the left side of the perineum, where, with a knife, the blade of which was a little broader than that of a common penknife, he made an incision proportioned to the size of the prominence formed by the stone, from a little behind the scrotum downwards between the anus and tuberosity of the ischium. He then made several deep incisions, some of which I believe were transverse, to make a sufficient opening for the exit of the stone; and to extract it he used an iron hook, an instrument that gave him more power, and took up less room, than a pair of forceps. Notwithstanding the enlargement of the inner wound two

or three times, considerable force and violence were required, and these he did not hesitate to employ, his principal consideration appearing to be the extraction at all hazards.

The calculus was of the mulberry species, hard and compact, of a spherical form, with an uneven surface presenting prominent pointed tubercles, and weighed upwards of 5vi. There was not much blood lost, and after the operation the thighs of the patient were brought together, and he was allowed to rest for some time. I understand that subsequently he was daily put into a warm bath, and when I again saw him the wound was closed and the urine passed by the urethra. The fee of the Hakeem, who is a Mussulman, and has operated by his own account in hundreds of cases, and who also professes to cure hæmorrhoids, was 10 rupees and rations for ten days for himself and his assistant.

There is nothing new or strange in this operation, for it was practised upwards of 2000 years ago. It was the similarity in the most minute particulars of the operation described by Celsus that struck my attention, and makes it worthy of notice. The position of the patient was the same, "*redactisque ejus cruribus, ipsum, quoque jubet, manibus ad suos poplites datis, eos quam maxime possit, attrahere.*" The instruments were exactly the "*scalpellum*" and "*uncus*," and the after treatment corresponded even to the warm bath. "*Deinde interpositis duabus horis, in solum is aquæ calidæ resupinus demittendus est,*" &c. In short, every step in the operation performed by this Hakeem was described by Celsus.

Calculus is by no means so rare in India, as, on the authority of Dr. Scott, it is stated by European writers. A man was brought in to me from a village in the neighbourhood with a stone impacted in the urethra, about an inch from the orifice, which I succeeded in breaking and extracting, and I have often removed stones from the urethra of children. This Hakeem states that in many districts of Candeish there is not a village he goes into where he does not find a case for operation. It is rare in Sepoys, because their period of life is not that which predisposes them to it. A diet containing very little azote may not be favourable to the production of the lithic acid diathesis; and still a tendency to form phosphate and oxalate of lime deposits may be owing to the use of vegetable and farinaceous food.

OBSERVATIONS ON THE COMPOSITION OF A NEW SPECIES OF CALCULUS,

FOUND IN THE KIDNEYS AND THE URETERS
OF A BITCH.

BY M. LASSAIGNE.

THE author of this memoir, published in the *Journal de Chimie Médicale*, for 1828, a detail of the analyses of various urinary concretions occurring in the dog. He showed that many of these were analogous in composition to those found in the human bladder; and inferred from thence a manifest conformity as regards the different functions of man and certain of the lower animals of similar organization. The remarkable feature in the present research is, that the calculus consisted of two organic principles, one belonging exclusively to the products of the renal or urinary secretion, the other only met with heretofore as a secretion of the liver. He has, therefore, very properly called it *urino-biliary* calculus. This fact, which seems unique in the history of concretions, merits the attention both of the medical practitioner and of the physiologist.

The animal which formed the subject of this observation was a bitch of large size, a sort of bull mastiff, which died in the hospital of the school at Alfort, from dropsy.

The cadaveric inspection was made by M. Prudhomme, who discovered in the kidneys, the ureter, and the bladder, a considerable number of small calculi, very irregular in shape, of a beautiful grass-green colour. Among other changes, it was remarked that the renal substance presented a faint yellowish tint, the liver contained in its texture little whitish granulations of phosphate of lime, and small well-defined cysts, of the bigness of a pea, filled with a soft matter of a greyish green, formed of half coagulated albumen, mixed with a little of the green principle of the bile, phosphate and carbonate of lime.

A portion of these calculi was carefully dried and pulverized; the powder emitted a slight urinous smell, and had a marked greenish yellow hue. In this comminuted state even boiling alcohol did not seem to act sensibly as a solvent, although the liquid assumed a pale green colour. Sulphuric ether afforded the same result. In order to determine the nature of the substance held in solution by these liquids, they were evaporated after being mixed. The residue after evaporation was a minute quantity of resinous like matter, of a fine green, insoluble in water, and which, by contact with dilute nitric acid, immediately changed colour; it became bluish, next violet, and lastly bright rose, by prolonged action at the ordinary temperature; this last colour finally changed

to orange yellow. All these effects of successive coloration induced by this acid, denote positively that the small quantity of green matter taken up by the boiling alcohol was the green substance of the bile, or *choleochrome*.

The feeble action exercised by alcohol on these calculi led to the substitution of a solution of caustic potash; this liquid, even in the cold, dissolved almost in totality the mass, and disengaged at the same time a strong odour of ammonia. The alkaline solution had a fine greenish yellow hue; saturation with acids occasioned a copious flocculent precipitate, of a greenish white, which, left to itself, was found reduced after the lapse of some hours to a greenish crystalline powder, composed of small flattened needles arranged in crosses. Microscopic examination having led to the belief that this was uric acid, the fact was verified by treating it along with nitric acid at a gentle heat, and evaporating to dryness; whereupon the characteristic carmine tint of murexide was obtained.

The uric acid, which the potash menstruum had dissolved, was combined in these calculi with ammonia, as shown by its disengagement above. It may be noticed that this acid, which in a state of purity is white, was here evidently combined with a certain quantity of the green colouring matter which neither water nor boiling alcohol was able to remove. After several attempts, however, it was completely separated by re-dissolving in a minimum of the potash solution, and adding to the liquor eight or nine times its volume of alcohol, at a temperature of 190° Fahr. This caused directly an abundant white flocculent precipitate of super-urate of potash, there being held in solution the green colouring matter combined with potash. By means of filtration and saturation with weak acetic acid, this matter was entirely withdrawn from the uric acid.

The above analysis, carefully repeated on a given portion of these calculi, yielded the following results, abstractedly of the order in which the principles are combined: uric acid 62.5, green matter of the bile 12.1, ammonia 25.4, traces of phosphate of lime and carbonate of soda, in 100 parts; or, taking the order in which the principles ought to be distributed, urate of ammonia 87.9, green matter of the bile 12.1, phosphate of lime a trace, in 100 parts.

These calculi, then, are not only remarkable for having uric acid as a constituent, a thing of rare occurrence in the canine race, but for having it associated with a principle peculiar to the hepatic secretion. This mixed composition would seem to favour the idea that in certain pathological states the urinary organs and the liver are so closely dependent upon each other, that the functions

of the one might sometimes supply those of the other, as indeed certain physiological and pathognomonic phenomena tend to establish.—*Bulletin de l'Académie de Médecine*, Dec. 1844.

VALERIANATE OF ZINC.

THIS seems to be the antispasmodic *à la mode*. It was first prepared by Prince L. L. Bonaparte. It is obtained by saturating valerianic acid with very pure and fresh precipitated oxide of zinc, in a crystalline form, as brilliant pearly scales, very bright and of dazzling whiteness. It is neutral, more soluble in hot than in cold water; soluble also in alcohol, ether, and oils.

According to M. Devay, the valerianate of zinc has been employed successfully in cases of facial and intercostal neuralgia, in megrim, and other affections of a *purely* nervous character. It has also been tried in epilepsy. The dose is from one and a half to four grains in the day. M. Cerulli, of Parma, is stated to have cured three cases of neuralgia (supra and infra-orbital) by administering this salt at the period of the attack, in the dose of a grain and a half daily, divided into two pills. By continuing the medicine in the above quantity a complete cure was effected in one patient after 30 days; in another after 40 days; and in the last after 50 days had elapsed.—*Annuaire de Thérapeutique*, 1845.

URIC ACID EXCRETED BY BUTTERFLIES.

ACCORDING to Heller, butterflies excrete more uric acid in proportion to their bulk than any other creature. It is chiefly the product of the metamorphosis which goes on in the *pupa*; the reddish or yellow liquid which butterflies void during or after emerging from the pupa into the perfect state consists principally of urate of ammonia.—*Oesterreich. Medicin. Wochenschrift*, 1844, p. 1048.

UNIVERSITY OF ST. ANDREWS.

THE Senatus Academicus of the University of St. Andrews have issued a confutation of various aspersions relative to their system of medical graduation, published in the last number of the Edinburgh Review. To the assertion there made, that "rejected or despairing candidates of Edinburgh, or of other schools, find a ready outlet at St. Andrews," they give a peremptory denial, and declare that it could only have proceeded from ignorance, or wilful perversion of the truth.

STATE OF THE THERMOMETER,
DURING JANUARY 1845.

To the Editor of the Medical Gazette.

SIR,

I ENCLOSE a record of the state of the thermometer at this place, within doors, and also at Brixton Hill, near London, during the last month, and if you think it likely to interest your readers, I shall be obliged to you to insert it in the GAZETTE. The thermometer at Torquay was placed in a small dressing-room, not communicating with another room, and having no fire-place, and was generally observed about half-past 8 A.M. That at Brixton Hill was noted daily about 8 P.M. and was in a spacious bed-room, having a fire-place, but at no time during the month was there a fire in it.—I am, sir,

Your obedient servant,
C.

Torquay, Feb. 3, 1845.

Jan.	Brixton Hill.	Torquay.
1	45	51
2	43	50
3	41	49
4	45	49
5	48	51
6	50	53
7	50	53
8	44	52
9	41	51
10	44	52
11	49	54
12	50	54
13	49	51
14	48	52
15	48	52
16	48	52
17	46	51
18	47	52
19	47	49
20	44	49
21	42	48
22	44	50
23	47	52
24	46	51
25	48	52
26	46	52
27	44	50
28	43	49
29	41	47
30	41	46
31	39	44

APOTHECARIES' HALL.

Gentlemen who have obtained Certificates,
Jan. 2.—Richard Savill Hanbury, Mirfield,

Yorkshire.—Barrington Richard Mudd, Geddington, Suffolk.

Jan. 9.—J. Taylor, Earls Colne, Essex.—C. Muscroft, Pontefract, Yorkshire.

Jan. 23.—E. Jotham, Barnet, Herts.—R. Cockerton, Sutton, Essex.

MORTALITY OF THE METROPOLIS.

Deaths from all causes registered in the week ending Saturday, Jan. 25.

ALL CAUSES 1092
SPECIFIED CAUSES 999

I.—Zymotic (Epidemic, Endemic, and Contagious) Diseases, 180; among which, of—

Small Pox	37
Measles	29
Scarlatina	28
Whooping Cough	21
Croup	5
Thrush	3
Diarrhoea	16
Dysentery	0
Cholera	1
Influenza	3
Typhus	23

II.—Dropsy, Cancer, and other Diseases of uncertain or variable Seat 99; among which, of—

Inflammation	0
Dropsy	26
Scrofula	5
Cancer	16
Atrophy	15
Debility	20
Sudden Deaths	10

III.—Diseases of the Brain, Spinal Marrow, Nerves, and Senses, 156; among which, of—

Hydrocephalus	43
Apoplexy	13
Paralysis	15
Convulsions	55
Insanity	0
Delirium Tremens	4

IV.—Diseases of the Lungs, and of the other Organs of Respiration, 325; among which, of

Pneumonia	75
Hydrothorax	1
Asthma	40
Phthisis or Consumption	145

Diseases of the Lungs, &c. 19

V.—Diseases of Heart and Blood-vessels 36

VI.—Diseases of the Stomach, Liver, and other Organs of Digestion, 73; among which, of—

Teething	19
Gastritis	0
Enteritis	11
Tabs	9
Hernia	3
Disease of Stomach, &c.	8
Disease of Liver, &c.	7

VII.—Diseases of the Kidneys, &c. 3

VIII.—Childbirth, Diseases of the Uterus, &c. 18; among which, of—

Childbirth	11
Disease of Uterus	3

IX.—Rheumatism, Diseases of the Bones, Joints, &c. 5

X.—Diseases of Skin, Cellular Tissue, &c. 0

XI.—Old Age 88 |

XII.—Violence, Privation, Cold, and Intemperance

16

WILSON & OOLIVY, 57, Skinner Street, London.

THE
LONDON MEDICAL GAZETTE,

BEING A
WEEKLY JOURNAL

OF
Medicine and the Collateral Sciences.

FRIDAY, FEBRUARY 14, 1845.

CLINICAL LECTURE
ON
DISEASES OF THE SPINE.

By SAMUEL SOLLY, F.R.S.

Senior Assistant-Surgeon to St. Thomas's
Hospital.

ON the last occasion that I called your attention to the subject of diseases of the spine, I pointed out an important distinction between the two classes of diseases to which this portion of the frame is liable; and those who feel interested in recalling those observations, will find them published in the 31st volume of the *MEDICAL GAZETTE*. In both forms of disease the spine is distorted, and the human frame is consequently more or less deformed; but in the one the curvature is from side to side—the *lateral curvature*; and in the other from before backwards—the *angular curvature*. In the first the deformity arises chiefly from a want of power in the muscles of the back, and the ligaments of the spine, to sustain it in the perfectly erect posture, and it bends into the form of the letter S, being at the same time twisted on its axis.

In the angular curvature, the deformity arises from the absorption of one or more of the bodies of the vertebrae, which, allowing them to fall forward, causes the spinous processes to protrude, and form a projecting angle posteriorly. The spinal canal is diminished in size; and from this cause, together with inflammation and thickening of the sheath of the chord, the nervous columns are pressed upon, and paralysis ensues. In the first case the muscles of the spine require to be exercised, and motion, with intervals of rest, and tonic medicines, are required. In the second, absolute and entire rest, with caustic issues, and sometimes mild mercurials, are necessary to arrest the disease, and save the spinal chord from destructive softening.

Nothing, then, you will perceive, can be more important than to distinguish these two classes of cases, requiring, as they do, such opposite modes of treatment. And if their diagnostic marks were always as clear and simple as they appear in a statement of the characteristic differences of the two diseases, nothing would be more easy and simple; but such is not the case. There are cases in which these characteristic differences are not so clear and evident, in which the lines of demarcation are broken down, as it were; and it is to this practical point that I wish to direct your attention. We have now a patient in the house, whose case I will read to you in a few minutes, with a lateral curvature, arising from caries of the spine, and the pathology of which was overlooked by a spine doctor into whose hands he fell when first taken ill, who treated it as a case simply requiring support; and he supplied him with a pair of stays, which he wore until he became almost paralytic.

Isaac Cripps, æt. 21, printer's devil; came to the hospital complaining of difficulty of breathing and weakness of his legs. Not believing that it had any thing to do with his spine, was admitted under one of the physicians who, having examined him, detected its real origin and seat, and sent him up to Isaac's ward, under Mr. Green, October 15th, 1844.

Short, but thick set; rather of a scrofulous appearance; thin skin; a good deal of colour. Complains of great weakness in his lower extremities, especially of the left leg, which has not power of itself to support the weight of the body. He could walk with difficulty, and not without support, dragging the left leg after him. Has not lost all sensation; his thighs are normally sensitive, but his feet and lower parts of his legs feel numbed and cold, with the sensation of needles and pins in his feet, and has frequently sudden pains in his legs, which make them draw up involuntarily. Pain in

the spine about the seat of curvature, which appears lateral, and about the situation of the sixth dorsal vertebra; he cannot lie on his back without pain, nor can he, when standing, balance himself properly. The curvature is towards the left side, and there is very little corresponding curve in the lumbar region. The thorax is also enlarged on the left side, about the same situation anteriorly; it projects on the right side, and towards the mesial line. The median line anteriorly presents a double curve.

Has worked four years at a printer's, putting newspapers on to the machine; this they effect by swinging their bodies over towards it; and to prevent their falling, from too great a swing, a high board is placed.

Two years and a half ago he was moving a large piece of iron with another man, when it fell down and struck his thigh, and knocked him violently against the wall; since that he has been much worse, but continued his work as before. He had an apparatus made for him, which he wore nine months; then left it off because it hurt him. He then got worse, and was unable to go on with the work, so went to another part of the business, to count off the papers, less laborious. Has felt the loss of power for four months.

16th.—Ordered by Mr. Solly—Spine to be painted with Tinct. Iodinii, and to take the iodine mixture with gentian.

26th.—Caustic issue.

Nov. 16th.—The legs, the left especially, have lately been drawn up at night involuntarily, and he has not power to straighten them. The nurse is obliged to replace them.

Another issue to be made near the seat of curvature.

Dec. 14th.—Pulv. Doveri, gr. viij.; Cal. gr. ij. omni nocte.

21st.—Has lately felt severe pain in his knees; is now much better; has felt much more power, as well as warmth in his limbs.

Another moxa to be made near the first, over the lumbar vertebra. Calomel increased to gr. iij.

Jan. 4th.—Another moxa was ordered to-day. He finds himself very much improved; his legs and feet have regained their normal sensibility, and he wants to get out of bed, saying he is quite strong enough.

13th.—Mouth first affected with calomel.

20th.—Discontinued, on account of the mouth being very tender; and all symptoms of paraplegia having ceased, he is very anxious of leaving the hospital, but Mr. Solly has persuaded him to remain quiet in bed for the present.

The first point to remark in this case is, the constitution of our patient. You will remember that it is strumous, and predis-

posed, therefore, to carious disease of the spine, in the event of this portion of the skeleton being injured. This man says that his attention was not called to his spine until he received the blow mentioned in the report; but he now remembers that he used to feel aching pains and weakness in his back previously. It is therefore most probable that some degree of diseased action had been induced in the bones by the constant exertion to which the column was exposed by his peculiar occupation, and that the blow merely aggravated what had been already lit up.

Mr. Pott, who has written a most interesting treatise on the connection between palsy of the lower limbs and curvature of the spine, makes some admirable observations on this point; he says (vol. iii. p. 425), "That although it sometimes happened that a smart blow, or a violent strain, had immediately preceded the appearance of the curve, and might be supposed to have given rise to it, yet in many more adults it happened that no such cause was fairly assignable, and that they began to stoop, and to falter in walking, before they thought at all of their back, or of any violence offered to it. That exactly the same symptoms are found in infants, and in young children, who have not exerted themselves, nor have been injured by others, as in the adult who has strained himself, or received a blow; and that the case was still the same in those grown people who have neither done nor suffered any violence." After adding other facts connected with the pathology of the disease, he says, "All these circumstances put together, induced me, as I have already said, to suspect, when we attribute the whole of this mischief to the mere accidental curvature of the spine in consequence of violence, we mistake an effect for a cause; and that previous both to the paralytic state of the legs, and to the alteration of the figure of the back bone, there is a predisposing cause of both, consisting in a distempered state of the ligaments and bones where the curve soon after makes its appearance."

These views of Mr. Pott are now generally adopted by the profession, and we must not attribute the disease entirely to the accident. Nevertheless, I suspect that the blow materially modified the character and progress of the disease. You will remember, from what I have already stated, that curvature of the spine which follows caries is almost always angular, projecting directly backwards. In this case, I have no doubt the lateral direction of the curve was occasioned by the blow striking the spine laterally, and thus injuring one side of the bodies more than the other, and causing the disease to progress more rapidly on the side of the vertebræ than in the front, its usual seat.

You will see, in this preparation, a lateral direction given to the curve, from the ulcerative process having extended on one side of the bodies only, and though we have no history attached to this preparation to enable us to say that any similar cause excited the disease to take this course, the appearance it presents will assist you in understanding how it is possible it might have thus occurred.

Sir B. Brodie, in his work on Diseases of the Joints, p. 242, relates thus the post-mortem appearances in a case where there was lateral curvature arising from caries:—"There were no remains of the intervertebral cartilage between the fourth and fifth dorsal, and the opposite surfaces of these two vertebrae were ulcerated to a greater extent towards the left side than towards the right, and hence arose the lateral curvature."

You will, then, understand, that you may have a lateral curvature from ulceration of the bodies of the vertebrae.

This patient, you have learnt, suffered from weakness and numbness of the limbs. This weakness and partial loss of sensation arose from pressure on the spinal chord. This pressure has been attributed, by some pathologists, to the acute angle which is formed in the canal from the falling forward of the bodies; but in this case it evidently could not be the cause. I do not believe that it is ever the case, but that the pressure is produced by deposition of adventitious matter within the canal, which matter is in some cases the fibrinous deposit from the inflammatory action of the membranes of the cord; in others, the strumous deposit of the bone which encroaches on the canal. It is important that you should understand this, otherwise you will not appreciate the value of mercury in the treatment of the disease, or understand why this patient improved so rapidly when the dose of that mineral was increased so as to affect his system. As soon as the pressure was removed, his nervous chords recovered their functions. If that pressure had been occasioned by the solid bone, it could not have been so speedily removed. But we must not pass over, in our consideration of the treatment, the effect of the moxa. To Mr. Pott we are indebted for our knowledge of the value of this form of counter-irritation, and I have no hesitation in saying that its effects are much more decidedly beneficial than an issue made in any other way. You will also find that it is much better to repeat them than to keep them open for any length of time. I generally close them after they have been open for a month. In a case of paralysis from disease of the spine, which I had under my care when I was Mr. Tyrrell's assistant, where the lower extremities had been entirely useless for twelve months, I applied at

least ten moxas, and the patient recovered the use of her limbs so perfectly as to walk well before she left the hospital. In the treatment of all spinal cases you must have patience, and not be discouraged because your remedial measures do not produce an early and decided improvement.

In the treatment of many chronic affections of the eye, especially those in which the retina is implicated, you may give mercury for months without any apparent benefit, till at last you perceive a slight improvement, and by perseverance you are eventually enabled to restore perfect vision, where, by a more hasty plan, the sight might have been destroyed for ever, or left irremediably injured, from a want of knowledge of the fact that a long-continued course of mercury, in very small doses, with counter-irritation, will effect so much.

The next important point in the pathology of diseases of the spine which this case will enable me to discuss is, on the one hand, whether ulceration of the vertebrae ever takes place without any consequent suppuration; on the other, whether or not there is a disease of the vertebrae by which the form of the column is altered, as in caries, but which is not caries. As a general rule, caries of the bones, like ulceration of the soft parts, is accompanied with the formation of pus, and in order to impress this point on your minds, so that you may appreciate the importance of the views I have to bring forward regarding angular deformity without suppuration, I will exhibit a case shewing the ordinary effect of caries with suppuration.

In caries of the spine, the matter sometimes finds its way to the surface in one direction and sometimes in another. Here is a cast of the back of a poor child whom I saw among the out-patients about two years ago: he was then five years old. The angular curvature of the dorsal vertebrae is very distinct: a little below, and on the right side, almost in the lumbar region, you observe this large rounded swelling, about as large as a child's head. This was an abscess. It was opened carefully with a valvular aperture, and then closed again. About two pints of matter were removed. The child's strength was supported with nourishing diet and tonic medicines; the parts kept as much at rest as possible; the abscess painted with the tincture of iodine; and the result has been that ankylosis has taken place, and the poor little fellow, though much shortened in stature, and deformed, is a cheerful happy boy, whose principal fault, his mother tells me, is that he will never be quiet, but is always running about. However, you shall see him for yourselves. [The patient was then brought into the theatre].

The opening of the abscess has not quite

healed yet, and occasionally discharges a small quantity of pus, but he is quite free from pain in the spine. I have brought this case before you with a double object: first, as exhibiting the abscess which is occasioned by caries of the spine, and secondly, in order to encourage you in the treatment of this disease, even where the collection of matter is excessive, and the patient, worn almost to a skeleton, seems on the very verge of the grave. When I first saw this case I certainly believed it to be utterly hopeless, but of course I did not tell him so or his friends, and we have been rewarded for our trouble. Do not despair yourself—and do not take away hope from your patient.

This case merely exhibits one of the many forms and directions which the abscess assumes in this disease, and as we have other cases in the house which illustrate the disease still further, such as psoas abscess, &c. I shall call your attention to these diseases at a future time, and we will now return to the consideration of angular curvature of the spine without suppuration. My attention was first called to the existence of such a disease by Sir B. Brodie. He described it to me under the title of rheumatic caries. I have seen two cases of it; both in the persons of medical men. They are both deeply interesting and instructive. In the first case, the true nature of the disease was not discovered until it had existed twenty years, and deformity had occurred; it was then that I first saw him professionally, and learnt from Sir B. Brodie his opinion. Shortly after this, I saw the second case, and from my knowledge thus acquired I discovered its real nature, and had a consultation with that eminent surgeon regarding it. He confirmed the view I had taken, and the result of the treatment you will find has been his restoration to health. In my friend's own words, which he has kindly sent me, I will give the first of these cases.

A. B.—“My illness began in 1825: I cannot tell why, but I experienced a pain on the right side of the seventh or eighth dorsal vertebra, for which I was cupped, and which has continued to recur at intervals ever since. My mode of life at that time was not, nor had it been for many years previously, (1813) such as to preserve health. I was exsanguineous, irritable, and thin—chlorotic. In 1826 and 27, I became more sensible of illness, especially in the autumn, and was occasionally laid by with fever and inflammatory symptoms, affecting chiefly the cerebro-spinal system. I should call this the inflammatory stage, and I believe that if it had been discovered at this time, and properly treated by local antiphlogistic remedies, change of air, &c., followed by a course of tonics and chalybeates, with a regulated diet,

it is my conviction that my present premature decay would have been prevented. As it was, the pain in the back was classed among the general symptoms of fever, and treated accordingly, or rather overlooked, for it was called ague; the immediate urgency was subdued by cupping, bleeding, &c. &c. The disease was reduced to a subordinate form, and the lesser symptoms of its progress left unperceived or unappreciated. These inflammatory attacks happened almost periodically from 1827, 28, 29. In 1830, I suffered from anasarca, with occasional pain and debility, and it was called debility with dorsal pain. 1831, 32, were tolerably quiet: severe attacks (spring and autumn) both of which demanded very firm and peremptory depletion. From this moment I date the decline of my strength—the vigour of youth departed (aged 29), and I was conscious that my health was sapped, although I was not aware in what manner, beneath the very centre and citadel of life.

This closed the inflammatory period. But the succeeding attacks were still severe, and of a mixed character, tending rather, although not entirely, to asthenic symptoms. I was conscious now of being weak in the back, at a particular point, eighth dorsal.

In 1835, I could not throw up the sash of a window, and dreaded putting on my boots. A midwifery case was torture to me, so was compounding medicine, or walking far, or a rough cab. Any one leaning on my arm was painful, and I stooped in walking. It was considered now that I had rheumatism of the costal and intercostal muscles.

In 1836 (Sept. and Oct.), I was seized with acute pain in eighth dorsal, fever, pulse 120, bad nights, costiveness, &c.: it was called rheumatic ague. There were spasm of the diaphragm, almost stopping the breath, chronic spasms of all the muscles of the trunk, coming on in epileptic spasms as it were, tearing, rending, grasping, and almost squeezing the breath out of my body; to laugh, cry, shout, speak, or turn myself, was utterly impossible till the paroxysm had passed. Often have I waited up stairs till the turmoil was over, then bandaged myself up tight with flannel roller, taken some laudanum, put on my great coat, and gone round to see my patients, and come home again to make up my medicine. Frequently at night a sharp pain would plunge through the spinal chord at the eighth dorsal like a knife, and cause me to twist round involuntarily in bed like a reptile. This state of things continued 1835-36-37, presenting the same features, more or less intense, which no one understood, and for which I was cupped, leeches, blistered, mer-

curialised, salined, diaphorised, antimonialised, barkified, depleted, dieted, fed up, fed down, at each several recurrence of the disease—all to no good, because everything was done at random, no one knew why or wherefore, while every one gave an opinion which was exceedingly good, save and except that it never once related to the real nature and seat of the malady. During this period, the bladder and the appendant organs began to be involved in the progress of the disorder, and phosphatic urine began to appear, and sometimes serous urine of a very low specific gravity.

In 1838, the evils thickened. It was utterly impossible to turn round in bed without making a previous preparation of the arms and legs; the pulse 92, the eighth dorsal always acutely sensitive. It was almost impossible to walk, or, if walking, to draw up on a sudden; to jump, leap, sneeze, or run, was quite impossible—I never attempted them. I was often hallucinated, and was sometimes unable to distinguish in my memory between dreams and realities. Yet I kept to my business (as well as I could), wore a bandage, took opium, and often went my round with a pulse at 120. I thought that death was staring me in the face, and I prepared to meet it. I consulted very many this year, but no one was sagacious enough to detect the disease; they prescribed and encouraged me, but in fact left me to myself. In the autumn, I covered my back all over with an ointment composed of ung. hydr. fer. pulv. opii, and cerate; this gave me relief, and I blessed the thought. Also this year I took, at different times, two pints of vin. ferri, and bottled porter also, which did good. About November, the eighth dorsal projected, and solved the mystery, pointing like a sign-post to the truth, which no one had hitherto been able to divine. By December of this year I was comparatively well, or at least easy, and 1839 began with cheering prospects.

From this time the inflammatory stage ceased, and the asthenic condition was fairly established. The nerves were shaken, the legs not so firm as they had been, and the bladder, &c. declined in power. But my spirit was now broke in, and I had learned to bear pain without complaining of it. Neither did I often consult any one about my ailments, as I looked upon obtaining relief as hopeless.

For the last five years I have never been entirely free from pain, while conscious of gradually losing power. The urine became gradually more phosphatic, the assimilative process more and more deranged, the difficulty of getting about greater and greater, and paraplegia more and more imminent,—till I was laid on my back, unable to rise,

August 1843. Thus my long and tedious illness was brought to a crisis, which forced me from the practice of my profession, and compelled me to pack up my tatters, and decamp as well as I could. I had long foreseen this extremity to which I was reduced, and was therefore better prepared in mind to meet it than most persons supposed. My plans were laid two years beforehand.

At this time all the symptoms were those of extreme debility—I was prostrate, and crippled, and I came to Brighton.

I was on my back, unable to be up for more than half an hour. At night I was in bed. I kept lying thus from August 1843, to January 1844, when my strength began to return. In December 1813 I was at my worst; pulse 100 and weak; wasting of flesh; costive bowels; bad appetite; sleepless nights; hæmaturia; œdema of the hands, face, and feet. During this period my strength was of course exhausted, but my appetite was voracious, yet neither wholesome nor agreeable. I required a great deal of porter, wine, or even brandy, and I was always thirsty, especially at night.

Pulse 92, weak and sharp; when lying down or standing up, much quicker. Skin dry and pale, especially the hands and feet. Tongue always clean but pale, marks of teeth in it. Mind perfectly self-possessed. Sleep bad. Drowsy at night, but awake at two or three o'clock unable to sleep again; often awoke in the night so exhausted as to be obliged to take brandy. Urine copious, pale, with a deep phosphatic deposit; often at 0, like hysteric urine, generally 4°. Sweet odour, unlike that of urine albuminous. As it rose in specific gravity, hæmaturia appeared, and alternated with lactic acid deposit. Always a good deal of cloudy mucus; and the urine when left standing became ammoniacal.

Numbness of the right leg, as high as the top of a Wellington boot. Both legs jumped involuntarily day and night. These startings took place thus: an electric spark (as it were) exploded on the foot, shin, or thigh of one leg, and instantly afterwards both legs jumped. At night they would be subject to subsultus so violent as to awake me in alarm: numbness of both legs always followed this subsultus. The right arm at times was subject to involuntary jerking, as if somebody pulled it with a cord. Also the head was at times jerked forwards involuntarily. I was fatter at that time than I am now. My back was very tender—skin (I am told) over the diseased portion suffused with a blush. My sight was defective, which is usually very keen. Double vision of right eye.

The numbness of the right leg, and the dimness or biopia of the right eye, are now entirely gone, and I have no knowledge of the one or

the other, except when, which is seldom the case now, the stomach is disordered, or the mind stretched.

On the 2d of January, 1844, I felt considerably better; got up, dressed and went out as far as the bottom of the Marine Parade is from the New Steine. From Jan. 1844, till February 1845, I have been on my back less and less, but I cannot sit in any chair but the one you saw. Nor can I go through the fatigue of a "visit" in an evening or so, without paying for it the next day so severely, that I am not inclined to repeat my gaiety. I am never quite easy unless I spend the day quite after my own fashion, *i. e.* a perfect recluse. My life is one of pain, inconvenience, and bodily trial, to this hour; anything beyond my reach is a difficulty to me, a person jolting me, or turning round, or stepping far. Nevertheless, I can walk for about three hours a day, a loitering walk; I *can* walk five or six, but with repentance. Not long ago I walked seven miles, but my legs became giddy, and I was forced to ride home in a fly which was fortunately close at hand. I am always better when I do not walk much, and the bowels act better; I require about twelve hours' bed. In this manner I keep well: what a limited existence! But a living dog is better than a dead lion! It gives me leisure to revolve my philosophy, or my religion, and to ponder on the end. "*Adolescentulus ego sum et contemptus; justificationis ejus non oblitus.*"

The recovery has been complete up to a given point—the back is stronger, the disease, I believe, has ceased to make progress, and the assimilative functions are restored in tone. But I must be very well aware that my constitution has received a shock which has penetrated to the centre, and that for the rest of my days I must be content to retain my health upon a tenure certain of being forfeited to the slightest inadvertence. Unless he is prepared to be charged with ignorance of the first principles of pathology, let no medical practitioner who pretends to any skill in his profession superficially suppose that a spinal case is a curable malady, or shut his eyes against its existence as an evidence, in fact, of a deeply-seated constitutional derangement, irremediable, progressive, and fatal—if it have not been recognised in its very first symptoms.

With regard to treatment:—

In the acute stage (1825—1838) the antiphlogistic treatment was only so much powder and shot thrown away, and rather tended to injure my constitution than to dislodge the enemy within it, by always having been aimed at the wrong mark, if aimed at anything; but afterwards, when blood was abstracted from the region of the spine, I always found benefit from it. The local ap-

plications which were of use were ointments composed of spermaceti, opium, and Ung. hydr. fort. spread upon lint, and covering the back; soap cerate always spread upon calico in winter, and the tincture of iodine.

In the asthenic stage (1839—45) iron stands at the top of the list as the most congenial to the disease, and the most to be relied upon; the *tinctura ferri muriatis*, and the *vinum ferri*, in small doses; nitric acid, quinine, and brandy, in some modification or other: good sherry is almost indispensable. The best aperients are aloe, with rhubarb, ginger, myrrh, galbanum, and the essential oils. Blue pill occasionally. The acid stomach is best corrected by tonics. Opium is always requisite. The chronic pain in the diseased bone is best alleviated by a sponge steeped in hot water, and held to the anus—I cannot tell why.

The medicines which disagree—

1. Salines, mercurials, iodine, hydr. potass. alkalies of all sorts, all infusions with mucilage—even beer disagrees on account of the mucilage—comp. decoct. *sarsæ* disagrees on this account. 2. All cold applications disagree. A draught of cold water at dinner will cause pain for the rest of the evening; cold bathing very pernicious, and cold ablutions.

Diet.—High, sustaining diet, without forcing the circulation. The only diet which really suits is plain roast mutton or beef, with bread, and two or three glasses of sherry, or a little brandy; tea, with a great deal of milk, mornings, and bread and butter, and the same in the evening. Every other article of diet either disagrees altogether, or gives rise to unpleasant feelings, acid stomach, and imperfect digestion; puddings, pastry, raw fruits, white meat, bacon, fish (except soles or cod without sauces) desserts of all kind, claret, port wine, all positively noxious. I must except rice, which, like bread, is a staff of life. Genuine bottled porter sometimes agrees very well.

Dress.—The most particular attention ought to be paid to the clothing. Warmth, not merely of dress, but during the time of dressing and undressing, must be carefully observed, especially in winter. It ought to be performed close by the fire, the bed ought to be warmed, and the feet placed in warm water at night, or wrapped in flannel, chafed with the hand, on retiring for the night. The shoulders ought to be protected during the night with a shawl or small flannel jacket. There ought to be no bed-fellow. The breakfast should be taken in bed before rising; warm water used for the hands and face. Cold ablutions (I repeat) are both painful and pernicious, often causing debility and dorsal pain for the remainder of the day. Every article of wearing apparel should be well aired at the fire

before putting it on (a cold shirt will give rise to pain), even before going out; the shoes, the great coat, the neckcloth, should be made warm, so as to carry out a certain quantity of heat buttoned up in the dress. Even in summer, a light cape will never be too much; an entire flannel gait should be worn next the skin, and worsted stockings in winter.

Exercise is not so fatiguing and pernicious as mental exertion, long-continued thought, or family anxieties.

I need not say that Wellington boots are never to be pulled on. The first intimation I received of my back giving way, was pain in throwing up the sash of a window, and next in pulling on my boots. Tying or buttoning shoes ought not to be allowed, nor reaching high for anything. The most painful and fatiguing exertion is the act of shaving, even to this day: I am positively almost inclined to abandon my beard, and come out like a regular Jew, like the author of the "Mysteries of Paris." It would have been fortunate for me if I had been born 300 years back, when beards were all the go.

Of the condition of the generative system in spinal disease.—In primo accessu hujus deformitatis, intacta vis genitalis est. Ille morbo vero durante, plerumque post paucos annos, quum jam medulla spinalis quodammodo compressa; vertebrarum ossa, ad mollietatem et gibbositatem degenerantia, nervorum facultatem renalium interrumpunt; adeo ut, vis virilis labascit lentè, et gradatim extinguitur, ad propria munera idonea damnata. Tum supervenit senectus precocis, facundumque nihil amplius secerantur semen, a cujus stimulo emasculatus æger omnino absconditur.

Aliquando tamen, excitatio prava, insuitata, ægrotum cum urgenti et inexplebili libidine ad veneris voluptatem instigat: at, chen! non etiam in thalamo, hæc cupido insatiabilis,—hæc fames tam turpis,—hoc modo laudabili per coitum vix eximi possit.

Languente tandem propter debilitatem virium momentum, sanguinis motus e corpore penis spongioso primo defluit, ac denique genitalia organa versus non amplius augetur. Fit impotentia, vel tantummodo sterilitas, aut siquidem potentia re-mansit virilis, singulari tamen lassitudine comitatur coitus.

Porro, interjecto deinde tempore, testes invicem inflammatione subacutâ correptæ, ac dolore diutino invasæ, imprimis tumescunt, tum marcescunt, et postremo tabescunt. Haud equidem rara, ni fallor, hydrocele, itidemque epididymis induratio, consecuti sunt:—suppuratio nunquam.

Non fortuito facta, ut reor, quod ita jam tunc accidunt hæc symptomata in cursu hujusmodi morbi.

You can make use of these remarks, if my dog-Latin be done well enough to go up in class.

I will now transcribe some, of which no one need be ashamed, which comprises the general outline of treatment for spinal disease, not merely for the time being under the doctor's hands, but, indeed, for the rest of the invalid's days. An advanced spinal affection is, in fact, premature old age:—therefore, "pugnandum tanquam contra morbum, sic contra senectutem. Habenda ratio valetudinis; utendum exercitationibus modicis; tantum cibi et potionis adhibendum, ut reficiantur vires, non opprimantur. Nec vero corpori soli subveniendum est, sed menti atque animo multo magis. Nam hæc quoque, nisi tanquam lumini oleum instilles, extinguuntur senectute, et corpora quidem defatigatione et exercitatione ingravescent; animi autem exercitando levantur —."—*Cicero de Senectute*, xi. 14—20.

This is the sum and substance of the medical treatment.

Yours, &c."

As our time has now expired, I must postpone to our next meeting the relation of the second case, and my views regarding the pathology of this interesting disease.

OBSERVATIONS ON THE NATURE AND TREATMENT OF THE MORE IMPORTANT DISEASES OF THE NERVOUS SYSTEM:

With Illustrative Cases.

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(For the *London Medical Gazette*.)

[Continued from page 602.]

Successful Cases.

CASE XI.—A man, aged 28, in October, 1822, after dinner felt headache; went to his work, and quickly fell into profound apoplexy. It was the third attack, in the first of which the loss of sense had continued for twelve hours. When seen by me shortly afterwards, the pupils were immoveable, and he was slightly convulsed; the head hot; pulse 80, strong and full; respiration slow and deep. He was bled in both arms to three pounds, when the pulse failed, and he opened his eyes and vomited.

Cold affusion on the head; purgative clysters.

In a few hours afterwards, some stupor remaining, and the pulse strong, and the bowels shut up, he was bled again to 7 ounces, when he became sensible, and vomited freely.

Cold and clysters repeated.

The next day, a little fever, and pain under the frontal bone; bowels costive.

Jalap with calomel, and a stream of cold water on the head; antimony with calomel every six hours, to salivate.

On the 3d day from the attack, heaviness of the head; little sleep; pulse 80; bowels purged.

Medicines repeated.

4th day.—Still little sleep; breathing oppressed.

The 5th day, slight dysentery; gums sore, having taken two scruples of calomel, and the same quantity of antimony, in three days. After this he recovered rapidly.

CASE XII.—A plethoric woman, aged 38, in 1823, when within a fortnight of her confinement, was attacked with severe pain in the head (she had also suffered from pains in the back and abdomen the day before), vertigo, succeeded by transient loss of speech and sense. The next morning the headache continued, with vomiting, and she became delirious, convulsed, and then comatose, with stertorous breathing; the pupils much contracted; the head very hot; pulse 68, very full and strong. Cold water was dashed on the head, and 30 ounces of very sized blood drawn from the jugular and basilic veins. In a few hours the relief was decisive, and purgatives completed the amendment. In two days she was delivered of a dead child, and recovered favourably.

CASE XIII.—A woman, aged 24, five weeks after a natural confinement in the autumn of 1824, got occasional attacks of epilepsy, for which a small quantity of blood was abstracted, and turpentine clysters given, by which she was sickened and purged. I saw her September 29th, when she complained of a deadness in the left arm and leg, pain at the orbits (usually worse on taking beer), occasional loss of sight, costiveness, and cold extremities; the tongue very white; pulse small.

Calomel and purgatives ordered.

The next morning I found her in apoplexy; the face turgid; pupils contracted and immovable; pulse slow and firm. After a bleeding to 30 ounces, and cold washing of the head, she became sensible. A solution of salts then given was vomited. A few hours afterwards the pulse remained at 60, and she complained of acute pain in the head.

A blister on the shaven head; purgatives and calomel every three hours.

The next day a return of convulsions, and of acute pain at the head on the least movement; pulse slow and small; the bowels purged.

Leeches, and a purgative clyster; calomel continued.

In the evening many feculent stools passed, containing tape-worm.

Oct. 2d.—Pain and heat of head continued.

Cold affusion, castor oil, and calomel.

3d.—Costiveness.

Purgatives and cold.

4th.—Great retching after purging.

On the 5th, the stools, that had been unhealthy, became natural. The 10th, able to sit up; occasional pain at head, which was relieved by cold and purgatives. Convalescence continued through the winter to March 1825, when she came again under my care for convulsions and a deadness of one hand, recurring in paroxysms of three days' duration, at intervals of three weeks, without headache; the bowels torpid. The symptoms were relieved in the course of ten days by the use of pills of aloes, galbanum, and mercury; blisters on the back, friction, and the vapour of hot water to the affected arm.

In November, 1827, I found that some months after the former period she became affected with epileptic fits, repeated three times a month, beginning in cramp at the hand, and on the sensation running up the arm, the senses failed. A fortnight after parturition, nine months ago, she had five fits in the night; after which they ceased for six months; and during pregnancy she had none! No menses seen since this confinement, and she was now nursing a fine child. In the last two months she had been bled four times. The existing symptoms, headache, deafness, a mist and flashes of light before the eyes; a weak pulse.

To wean the child. An embrocation on the spine. Pills of sulphate of zinc, galbanum, and opium.

After this her health improved to April 1830, when she came under treatment for ten days for spasms of the arms and eyeballs, which were cured by leeches, a blister on the neck, calomel, purgatives, and six drachms of colchicum wine.

CASE XIV.—A man, aged 65, was afflicted in the beginning of April 1827 with tremors like chorea, succeeded by sleeplessness, confusion of thought, lethargy, a ringing in the ears, loss of appetite, and costiveness; the tongue white; pulse strong. These symptoms continued to May 23d, when I saw him.

Bleeding, purgatives, with diuretics. Antimonial ointment on the scalp.

In a week much relief; the scalp pustulated.

Croton oil, with oil of turpentine.

June 15th.—Head complaints worse since costiveness; pulse 68, full; scalp very sore by the ointment.

Bleeding to twelve ounces (the coagulum loose and convex.) Purgatives.

The next day three convulsive fits, and imperfect palsy of the legs; much headache and sleeplessness.

Leeches and purgatives.

After this considerable relief, but succeeded by despondency and occasional delirium; the pulse 60 when asleep, 70 when awake; the scalp suppurating. In a few days more delirium and sleeplessness, with costiveness.

Purgatives.

Then an hysterical fatuous state; the scalp sloughing; costiveness continuing. In the following week, to July 5th, more fever, delirium, and tremors; the scalp healing. This state continued to the 31st, when, after being costive, he fell into profound apoplexy; the pulse large and strong. He was bled two hours afterwards to fifty-four ounces, before the pulse was impressed; the blood inflamed.

Calomel, jalap, and castor oil.

In a few hours he recovered his senses, but could not speak. The medicines had failed to purge; then full purging followed on repeating the purgatives, and he regained the power of speech.

Aug. 1st.—The purging continued, with great amendment. The next day a diarrhœa, for which opium with tartarized antimony was given.

3d.—Diarrhœa, requiring opium with chalk.

4th.—Pain and swelling at the hypogastrium, although the urining free.

Aperients, and a blister to the abdomen.

8th.—Every symptom better, except the imperfection of speech. By the 17th the power of speech was restored, and he could resume his business as a grocer.

On September 3d, having had a diarrhœa for some days, he took brandy and water at supper, and the next morning breakfasted on fish; after which he became speechless; the pulse full and strong. The abstraction of five ounces of blood was followed by severe tonic spasm of the arm, coma, and foaming at the mouth. Some croton oil was then given, which in a few hours excited vomiting; after which he was much relieved, except that his speech was lost.

The next day severe convulsions and watery diarrhœa.

5th and 6th.—Convulsions.

Purgatives, and a blister on the neck.

Then purged of feculent stools, and speech restored. The amendment continued to the 15th, when he died tranquilly, from gradual exhaustion.

CASE XV.*—A woman, 60 years of age, whose habits were intemperate, but of good general health, was affected, January 22d, 1820, with acute epilepsy. The fit returned in a few days, and she was then bled. When she came under my observation, on the ninth day of her illness, she was delirious; then slightly comatose, and hemiplegic on the right side; countenance fatuous; tongue white; pulse natural. An opiate was given by her medical attendant, after which the mouth was drawn to the left side; the palsy more complete; pulse 88, firm; the bowels very costive.

A blister to the neck; purgatives.

The 11th day, not better, costiveness remaining.

12th day, incoherent; urine passed in bed; costiveness; pulse 96, full and firm.

* This case I saw in the practice of a physician deceased.

Elaterium, one grain every hour; ten leeches to the temples.

After six doses having failed to purge, and the symptoms remaining, she was bled to seventeen ounces; the blood buffy and cupped.

On the 13th day, speech less inarticulate; countenance more intelligent; an attempt made to move the arms when requested, but the muscles rigid, and pain excited by stretching them; pulse 112, firm. Costiveness continuing, after twelve grains of extract of elaterium.

On the 14th day a great improvement, from two copious stools from calomel and jalap.

15th, muscles less rigid; black spots on the sacrum.

16th, voluntary power increasing, but pain still existed on movement.

In five days more the memory restored, and she could walk. Convalescent in three weeks from the attack.

CASE XVI.—A man, aged 30, on January 25th, 1825, was reported to have fallen down the shaft of a mine to the depth of more than 100 feet, where he was found insensible, with the head downwards. No fracture was visible; the scalp was cut, and the loins bruised. While in this state of concussion and stupor, a vein was opened by a surgeon, but no blood flowed. Afterwards he became affected with vomiting, febrile symptoms, stupor, alternating with delirium.

On the second day he was largely bled (the blood not inflamed); and calomel and antimony were given every six hours, and saline purgatives.

On the 10th day I saw him, affected with vertigo, as if drunk, on assuming the erect posture; delirium, which was worse on movement or noise; respiration slightly stertorous; pulse 96, jarring; he was also very lethargic, but sensible when roused; the pupils contracted during sleep; moveable, but not equally so, on applying the candle to them; on his awaking they became dilated and fixed. It was believed that serous effusion in the brain had taken place, but the prognosis was favourable.

Calomel with antimony was repeated to salivation; a blister on the head; heat to the feet. A diet of gruel; and extreme quiet.

The next two days were passed in heavy sleep, broken by his starting up

in violent delirium; at times, however, he was sensible enough to complain of pain in the temples and in the bowels, which were affected with a mucous purging from the medicines. The pupils were natural.

Calomel continued, the mouth not being affected; and an opiate clyster. Antimonial ointment on the head; a milk diet; and camphor julep, with nitre.

By the 16th day the dysentery was relieved by the opiates; the scalp severely irritated by the ointment; violent nocturnal delirium; at times complaint of the head; instability on assuming the erect posture; pulse 104, tremulous; gums sore by the mercury, which had been taken for five days.

The ointment continued, with a poultice of linseed, and decoction of poppies. Calomel in fewer doses, and laxatives.

The delirium ceased after the poultice, and on the 15th day every symptom had improved, but the pulse was as before.

Mild diet and laxatives.

On the 22d day a still greater amendment; the pulse in the morning became natural, and in the evening he appeared for the first time perfectly to have recovered his consciousness, and he recognized his friends. From this time convalescence was uninterrupted.

SECT. II. ON PARALYTIC AFFECTIONS *without previous Coma, and on protracted Palsy when the apoplectic disposition has passed away.*

The relation of palsy to apoplexy, in a pathological and practical view, is generally admitted. It occurs, however, as a simple and primary affection, even when its origin is within the head; and it may terminate favourably, or pass into apoplexy, on a more powerful application of the exciting causes, or when it has been treated inefficaciously. Some of its symptoms are peculiarly singular and interesting; such as—(a.) The remarkable variations in the state of the pulse, and of the animal temperature of the affected limbs, in connection with an improvement or aggravation of the other symptoms. This feature is seen in Case XIX. and yet more strikingly in a case to be narrated hereafter, among spasmodic affections. (b.) Spasms of the palsied limbs, without any effect on the palsy.

(c.) Habitual tremors of the limbs, without any loss of feeling or of voluntary power, forming the paralysis agitans of writers; of which Case XXIV. is an interesting example. (d.) Thermometric coldness of the affected part, without sensation of coldness; and the converse. (e.) Incessant and severe hiccup, which does not seem to affect the course of the disease. (f.) The tendency of compressed parts to slough. (g.) Various affections of the senses of touch, hearing, and sight, with sometimes long interruption of the sleep, without mental disorder.

Primary palsy, like apoplexy, is sometimes connected with obscure disease in the heart and aorta, and is often the first symptom that rouses the attention of the sufferer to his real state.

It is singular that palsy so seldom arises from chronic epilepsy, although it is sometimes connected with a first attack of acute epilepsy, or transient apoplexy with convulsions.

Palsy, at first simply paraplegic, from an affection of the spinal chord, may pass into hemiplegia with a brain affection.

Chronic cases of weakness of the limbs, appearing to be rheumatic, are sometimes truly paraplegic, and are often mistreated. A sense of girding in the abdominal muscles is sometimes the first symptom in these cases, and should direct attention to the spinal chord.

Simple or primary palsy is generally more hopeful than palsy secondary on apoplexy. Recent cases of hemiplegia are hopeful, although the senses of sight and hearing are affected with illusions, and other evidence is present of an extensive affection of the brain: Case XIX. Recovery from a very decided attack may take place in three weeks, when early treatment is employed: Case XVIII. Instances of a recurrent attack, at an interval of some years, and even where the speech has been affected, may end in recovery. Hemiplegia, however, when connected with disease in the heart, is hopeless. Incomplete paraplegia, with neuralgia of the lower extremities, even when of two years' continuance, is hopeful, when the encephalic and vital functions are unbroken. In paralysis agitans of one year's continuance, com-

plete recovery is not to be expected; but it may admit of great relief. Sloughing of any part subjected to pressure is a bad sign, particularly that painful sloughing of the ball of the great toe; the vital powers then quickly sink.

It is cheering to know that, in apoplectic hemiplegia, with a severe shock to the mind, the intellectual energies may be perfectly recovered, if the constitution be sound, and the habits of the patient good; but this is not of itself an infallible ground of hope regarding the palsy. The state of the palsied limbs as to their nutrition and temperature, and that of the organic function in general, are a better criterion of recovery than the period of time elapsed since the paralytic stroke.

Palsy secondary, on acute epilepsy, the coma being transient, is more hopeful than that following decided apoplexy; and it admits of hope even although the epilepsy has been recurrent and severe, and after disease in other organs; but if proper remedies have been neglected in the first fortnight of the attack, partial palsy may be expected to remain; and, generally, hemiplegia following epilepsy is of bad omen.

Palsy has various origins:—(a) an encephalic origin; in which case it differs only from apoplexy as the lesser from the greater, a part from the whole. Its true cause appears to be pressure on the "figurate brain,"—or the corpora striata, crura cerebri et cerebelli, medulla oblongata, tuber annulare, and the origin of the various nerves of motion and sensation. The notion of a palsy-shock as something distinct from pressure and vascular fulness, is not very intelligible: the only case, as it appears to me, of such a condition, is that from a stroke of lightning so powerful as to destroy life. In any case of a paralytic seizure, however sudden, from ordinary exciting causes, the original proximate cause is pressure connected with sanguineous congestion. The palsy, indeed, does not always disappear as soon as the momentum of the circulation is removed: in some cases the palsy is maintained by a congestion of venous blood in the dilated vessels, and in others it may be referred to a lesion or compression of

the medullary substance, for the restoration of which to its natural state time is required.

An important fact to be known is, that partial palsy, as of the side of the face, or of one hand or one finger, may have, and often has, an encephalic origin, and is liable to pass into apoplexy. In the case of palsy of the facial nerve of the seventh pair, as in Case XXV., it is sometimes difficult to ascertain the origin of the disease: to mistake an encephalic for a local origin would be of serious consequence. Hemiplegia, without coma, or the least affection of the mental powers, sometimes arises from a clot of blood in the hemispheres of the brain.

In a case of headache, hemiplegia, and fatuousness, fatal without coma, there was extensive softening of the walls of the right ventricle, and of the corpus striata and optic thalamus, with much serum in the ventricles. The symptoms had succeeded to erysipelas of the legs.

(b) Palsy has a spinal cord origin. Hemiplegia probably has always an encephalic origin; but more partial palsy, whether of a single muscle, or of the abdominal muscles and pelvic viscera, or of the legs, or of the arms, may have its origin in the several horizontal segments of the cord. Thus I have seen palsy of both arms alone, from disease in the cervical part of the cord; and palsy of the legs also, from disease in its lumbar and sacral portion.

(c) Palsies also arise from disease in the nerves external to the brain and spinal cord, as those noticed by Dr. Cullen, in his "*Class locales; orders, dysæsthesiæ, dyscinesiæ*;" they do not here require a remark, no cases of them being given.

The treatment of palsy.—(a) in its acute state. In the instances of an encephalic origin, the cure for apoplexy is of course adopted; this will generally prevent a subsequent attack of apoplexy, and confine the sphere of the disease, although it may fail to cure it entirely. The cases show that the cure is very protracted, when only bleeding and purging have been employed, and mercury neglected: as likewise, that active purging will be insufficient at an advanced age, when bloodletting is omitted. In the cases from a spinal-chord ori-

gin, cupping, more particularly, is of great service; and, in these cases also, it is scarcely possible to carry purgatives too far; so great is the torpor of the bowels, and so vast the accumulation of feces, that the practitioner scarcely knows when the bowels are really unloaded.

(b) In the chronic state:—this state is not to be judged of merely by the interval of time from the attack; the disease may long subsist in a sub-acute form, or it may quickly pass into a passive state, particularly in a recurrent attack, and may bear stimulant remedies, such as galvanism, strychnia, and hot mineral waters;—when the disease has its origin in the head, to determine the diagnosis of these states requires the severest exercise of judgment. In a case of chronic weakness of the legs, where porter was allowed, the paraplegic affection became hemicplegic, which was much relieved by cupping: the medical attendant afterwards gave brandy and bark, thinking it a case of pure debility, the consequence of which was a second attack of palsy, and which ended fatally. In another case harm was done by tonics in an apparently chronic state of palsy in the face from a cerebral origin.

Strychnia was of singular benefit in a case of palsy of the thighs, with extreme costiveness, from disease in the spinal chord; it seemed greatly to aid the operation of purgatives.

Iodide of potassium, and a mercurial plaster on the sacrum, were also of great utility in a case of long standing, where mineral waters and quinine had been found useless.

CASE XVII.—An elderly woman was affected December 17, 1821, with sudden loss of power of the right side, after a sense of numbness in the part for a short time previously. On the 4th day, speech and deglutition difficult, tongue dry and loaded, pulse 98, jarring.

Purgatives.

5th.—Headache and confusion of thought; articulation improved, after passing a stool.

Leeches to the temple, head shaven and blistered, purgatives repeated.

6th.—The buttocks found to be sloughing; involuntary dejections; headache relieved after purging. 7th.

Appetite and sleep gone; feelings improved.

Calomel and jalap.

Palsy as before; pulse 84, soft. 9th, return of headache; pulse jarring; bowels free; sloughing parts doing well.

Leeches and purgatives.

10th.—Headache; flushing of face; restlessness.

Leeches, purgatives, and an opiate.

11th.—Headache continuing, bowels being costive.

Calomel and jalap, and a clyster.

13th.—Still headache; pulse 72, jarring.

Purgatives and opiates.

15th.—Sleeplessness; pulse 96, harsh.

16th.—Better after purging; slough removed; sores healthy.

17th.—A small tumor discovered over the articulation of the right clavicle with the sternum, pulsating strongly.

To the 21st, little change; then, shivering and delirium; pulse 132.

Wine and opium, and purgatives.

22d.—Sores more sloughy; pulse 156, irregular: death, the next day. The palsied side became quickly cold after death; the other side retained its heat!

Inspection.—A clot of blood in the left hemisphere, near the corpus callosum. The arteries rising out of the chest much dilated and curved.

CASE XVIII.—A man of middle age, formerly intemperate, latterly sober, on November 21st, 1821, was suddenly attacked with headache and palsy of the right side, succeeded by vomiting on taking medicine, and more acute headache, which continued to the 24th, and was then attended with incoherence and confusion of thought.

Bleeding to 24 ounces; head shaven and blistered; purgative medicine and clysters.

The 4th day, pulse 66; tongue white; two stools only.

Calomel 15 grains; clysters and salts.

5th.—Urine that was passed in bed now passed naturally; purgatives ineffectual.

Jalap, with calomel, and clysters.

6th.—Less palsy of the arm, the bowels being freely purged.

7th.—Headache, but mind more collected; right leg still palsied; pulse 88, full.

Leeches to the temples.

9th.—Palsy lessening, but headache remaining. In the next eight days, a gradual amendment from mild purgatives; meat then allowed, which was followed by severe headache, for five nights preventing sleep; pulse 104.

Purgatives, and cold washing of the head.

25th.—Convalescence advancing, but the right eye and cheek œdematous.

CASE XIX.—A man of a full habit, 65 years of age, affected with hemiplegia of the right limbs, loss of feeling and of muscular power of the right cheek, and of the muscles of the tongue, which was turned to the right side, but its feeling unimpaired; black spots before the eyes. The illness was of recent origin; ascribed to exposure to cold.

Bleeding: the blood sily; purgatives.

January 29th, 1820.—No headache; the palsied side feels cold to himself, and is sensibly colder, and the pulse of the palsied arm is much weaker than in the sound!

Cold washing of the head, and purgatives.

30th.—Headache all night, with the cold washing; bowels purged, and the muscular power of the tongue and limbs much improved; pulse 80, full, feeling better on the head being elevated in bed.

Leeches and purgatives.

31st.—More heat in the palsied arm after purging; black spots seen before the eyes. Then an improvement to February 7th, while taking antimonial powder, but the disordered vision continued.

Purgatives and cold washings resumed, and 10 grains of antimony every night; 4 drachms of mustard-seed every day.

These medicines were continued, (the antimony induced strong purging) with a liniment of turpentine and ammonia to the limbs, and by the 20th he was convalescent, after three weeks of treatment.

CASE XX.—A woman, 35 years of age, after severe exposure to cold, got amenorrhœa, which was succeeded by pain in the legs, and loss of muscular

power, but not complete palsy: these symptoms continued for 9 months, to July 1832, when she took sarsaparilla and nitric acid, for weakness and perspirations; a blister was put on the sacrum, and camphor liniment on the legs. In the course of three weeks she was so much improved as to walk out of doors: then a bowel complaint came on, which was relieved by calomel and magnesia; and after this, the mineral acid was resumed with benefit. In the last week of February, however, after drinking porter to excess, vertigo came on, succeeded by an extreme sense of coldness on the head, loss of speech, and palsy of the right limbs. Cupping in the loins, blisters, alteratives, and aperients, made a great amendment in the course of three weeks, and then change of air was recommended. At the end of April, I saw her again, nearly dead, after having taken brandy and bark, which had induced excessive purging and general drowsy. At the middle of May, another paralytic seizure ended fatally.

CASE XXI.—A young man of studious habits, in November 1828, after exposure to cold, was attacked with palsy of the right cheek, and pain in the seat of the portio dura of the seventh nerve.

January 9th, 1829.—No head complaint.

A blister behind the ears.

15th.—The same state.

Mercurial antimonial ointment on the cheek, and alterative medicines.

Feb. 2d.—Some headache and low spirits; right side of the face swollen; the left nostril retracted, the right sunken; loss of feeling in the inside of the right cheek; mouth drawn to the left side, and more so on shutting the lips; costiveness, and a small pulse.

Oil of turpentine and castor oil every morning; extract of gentian and ammoniated copper; meat diet, exercise, and electricity.

March 2d.—Palsy the same; headache and sleeplessness; bowels slow, strength improved.

Purgatives.

20th.—More retraction of the left cheek, and confusion in the head.

Cupping to 10 ounces, and mercurial purgatives; antimonial ointment on the scalp.

22d.—Great relief of the head; cheek less retracted.

Leeches and purgatives.

In April, he continued gentle purgatives and leeches, and at the end of the month the palsy was much relieved, and he felt well.

[To be continued.]

SURGICAL CASES

OCCURRING IN THE

ST. MARYLEBONE INFIRMARY,

Treated by

R. A. STAFFORD, Esq. F.R.C.S. &c.

Surgeon to the Institution.

(For the London Medical Gazette.)

CASE I.—*An external opening between the first and second ribs of the left side, communicating with a cavity in the left lung.*

July 25th, 1844.—Thomas Butler, æt. 27, had long been the subject of phthisis. He expectorated purulent matter, and several cavities, by stethoscopic examination, existed in both lungs. About six or eight months previous to his admission into the Infirmary, ulcers formed on his neck and chest. Those on the neck were situated immediately above the clavicle, and ulcerated very deeply behind that bone. On the left side there was an ulcer between the first and second rib, about an inch in circumference, and very deep, communicating with the lung. Air was both inspired and expired through it; inasmuch that if lint, or any other application, were placed upon the opening, it could be drawn inwards or blown off according to the inspiration and expiration. If the flame of a candle, also, was placed opposite to the aperture, it could be nearly blown out, and the air could be distinctly heard rushing from the lung. The patient, however, did not like the wound to be open, and expressed that it distressed him if it were exposed to the air too long. It was therefore always kept closed and protected, and the external atmosphere was never admitted, excepting when the wound was dressed. The sores discharged very profusely, and the poor fellow was in the lowest condition.

It could hardly be expected that recovery could take place with such

extensive disease of both lungs: consequently, the patient was supported and nourished, and those medicines were prescribed which palliated the disease, and made the way easy to the grave.

Post-mortem.—There was an oval ulcer in the neck three-fourths of an inch in depth, immediately above the clavicle, and also another of the same description. The ulcer between the first and second rib on the left side was connected with a phthisical cavity in the upper portion or apex of the left lung. Both lungs were extensively diseased. The dissection was made by Dr. Boyd, who has been so kind as to favour me with an account of it, and he informs me that both of the ulcers, that above the clavicle and that between the first and second rib, communicated with the œsophagus.

This case is extremely interesting, and more particularly at the present time, since Dr. Hastings and Mr. Storks perforated an excavation of the left lung. It would appear that nature herself pointed out the mode of relief in some cases. This man lived for several months with a cavity in the left lung, connecting it by an opening in the left side with the external atmosphere. He died from extensive disease of both lungs, nor did it appear that the communication of the cavity with the air at all accelerated his death; for although he did not like the wound to be exposed for any length of time, yet he never had any objection to gratify the curiosity of those who wished to see it.

Besides the case I have just related, I have seen two others where external openings were connected with the cavity of the pleura. One occurred not a year ago, and was owing to caries of the second rib on the right side. In this the cavity of the pleura was full of water, and it could be sponged out through the external opening. The other case was much of the same description, and arose from disease of the fourth or fifth rib on the right side.

CASE II.—*Case of a diseased ankle-joint.—Amputation.*

W. Stabback, æt. 40, of a strumous diathesis, was admitted into the St. Marylebone Infirmary, with a diseased ankle.

It first began with pain in the joint,

which afterwards became swollen, and apparently contained synovia. Leeches were frequently applied, and afterwards blisters, but with little benefit. Abscesses formed, and discharged pus, leaving sinuses behind, which were connected with the joint, and a probe could be passed into it. More sinuses formed, all of which ran into the cavity of the joint. Poultices, &c. were applied. The man got worse, but he declined losing his leg. He was supported by nourishment, but no remedies were of the least use; his health began to suffer. It was represented to him that if he did not consent to amputation he would die; he still declined the operation. He got worse and worse, being hectic, and becoming extremely emaciated; he now himself began to see his condition, and of his own accord requested that the limb might be taken off. For three or four days before the operation was performed, he was supported by nutritious diet—wine, porter, eggs, &c., but it was feared incipient phthisis might exist.

The operation was performed in the presence of Dr. Harrison, Dr. Boyd, and other medical officers of the staff, Mr. Avery, surgeon of the Charing-Cross Hospital, Mr. Markham, &c. The circular incision was preferred, as being the safest in this case. The limb was removed in about three minutes. The man was taken to bed, and an opiate administered. The stump went on well. No fever of any consequence supervened. On the third day slight erysipelas appeared on the stump, but which disappeared in two or three days. He was ordered a generous diet—wine four ounces, beef-tea, strong gravy, one chop, and three eggs daily. His pulse, which had been reduced to the lowest ebb before, now increased in strength, but still was very feeble. He took the Mist. Cinchon. Arom. every six hours, and an anodyne at night. The stump began to suppurate, and discharge freely. All went on well; the ligatures came away; at present the wound is nearly healed; and the patient is much improved in health.

On making a section of the ankle-joint, it was found that three or four sinuses ran into the capsular ligament. The synovial membrane covering the cartilage was partly absorbed, and on the surface of the cartilage of the joint

itself considerable ulceration existed. There was ulceration in the bone between it and the cartilage, and the cellular structure of the former was softer than natural.

CASE III.—*Disease of the Sternum.*

Thomas Lovesey, æt. 55, was admitted into the Infirmary, Nov. 19, 1844. About two years ago, he suffered great pain in the chest, having a cough at the same time, and also expectoration. He first felt pain in the sternum about eighteen months ago. Swellings appeared, which became inflamed, and broke and discharged matter. More abscesses formed, from some of which there was a considerable discharge of blood. At this time there are about fourteen cicatrices, and four or five wounds open. They appear to be connected with the bone and cartilage of the sternum itself, as these structures can be readily felt at the bottom of the sore by a probe. The treatment has been at first poultices, since which, as the sores were evidently of a strumous character, a lotion of iodine has been constantly applied by dipping lint into the solution, and laying it over the sore.

℞ Iodinii, gr. j. ; Pot. Iod. gr. ij. ; Aq. Pluv. ℥iv. M. ft. Lotio.

The constitutional treatment has been bark, quinine, and other tonics, combined with generous diet. Under this treatment all the sores healed, but the lungs, though quiet, are still diseased.

That there is a sympathy between internal and external parts there can be but little doubt, and this case particularly exemplifies it. It would seem that nature herself threw out her own counter-irritation.

[To be continued.]

STRUCTURE OF THE CORPUS LUTEUM.

To the Editor of the Medical Gazette.

SIR,

A PAPER was published by me, on early corpora lutea, in the September number of the *Edinburgh Medical and Surgical Journal*. In it I noticed a case which had given rise to some discussion between Dr. Robert Lee, of London, and myself; and I there published

the correspondence which had taken place.

In your journal for November 8, 1844, Dr. Lee has published a reply, containing statements controverting what I had then said, and calculated to throw doubt on the accuracy of my remarks. I therefore have to request you, as a simple act of justice, to admit the following explanation into the pages of your valuable journal.

The chief ground of complaint which Dr. Lee seems to urge, and to continue to repeat, is, that I have either suppressed one letter from him, or not published correct copies of those letters which he sent to Dr. Bowman and myself. All the letters that were received either by Dr. Bowman or myself were published in the 161st number of the *Edinburgh Medical Journal*, with two exceptions; these, however, I now subjoin, and also the accompanying document from Dr. Craigie, the respected Editor of the *Edinburgh Medical and Surgical Journal*, to shew how far the letters I formerly published, and the copies of the two now published, accord with the originals.

Edinburgh, 22d January, 1845.

I have examined the originals of all the letters which were addressed by Dr. Lee to Dr. Bowman and Dr. Paterson, on the subject of the corpus luteum submitted by Dr. Bowman, in May 1844, to Dr. Lee for examination, and which letters, excepting two to be afterwards specified, were published in the 161st or October number of the *Edinburgh Medical and Surgical Journal*; and the following I find to be the result.

The letters are eight in number; seven written on 8vo.-sized post note paper, and one on ordinary-sized post paper.

They bear the following dates:—

1. 13th May, to Dr. Bowman; the same as No. 2, published in page 468, No. 161, *Edinburgh Medical and Surgical Journal*.

2. 22d May, 1844, to Dr. Bowman; No. 3, of page 468, No. 161, *Edinburgh Medical and Surgical Journal*.

3. 26th June, 1844, to Dr. Bowman; No. 4, of page 469, No. 161.

4. 30th July, 1844, to Dr. Paterson; No. 6, of page 470, No. 161.

5. 5th August, 1844, to Dr. Paterson; No. 8, of page 471, No. 161.

6. 6th August, 1844, to Dr. Bowman; not published in the Medical and Surgical Journal.

7. 12th August, 1844, to Dr. Paterson; No. 11, at page 471, No. 161.

8. The letter on ordinary-sized post paper, dated 30th July, 1844, addressed to Dr. Bowman; not published in the Medical and Surgical Journal.

All these letters are distinctly in the hand-writing of Dr. Lee. All of them published correspond *verbatim* with the copies published in the 161st number of the Journal, except the two following circumstances in the letter of the 26th of June, 1844. In the original, instead of "important business," the expression is "unexpected business." But the word "unexpected" is written so indistinctly, that it might be read hastily "important."

In the same letter, at the end, the expression is very truly yours, instead of yours very truly.

There is no letter of date between the 13th of May, 1844, and the 22d of May, 1844.

A letter marked No. 9, from Dr. Paterson, and published in the 161st number of the Edinburgh Medical and Surgical Journal, p. 471, with the date 9th of August, 1844, has been made the subject of complaint by Dr. Lee, who states, that he never received that letter, but received one of the 10th of August, differing certainly in several modes of expression*. Both letters have been since published in the MEDICAL GAZETTE, November 1844, No. 5, vol. xxxv. p. 158. The facts and statements in both letters appear to me to be substantially the same. At all events any reader may compare them and form his own judgment.

Of the two letters, dated 30th July and 6th August, not hitherto published, the following are exact copies.

DAVID CRAIGIE.

London, 4, Saville Row,
30th July, 1844.

MY DEAR SIR,

WILL you have the kindness to send me at your earliest convenience the two letters which I wrote to you stating the grounds from which I was led to conclude that it was a true corpus luteum which was forwarded to me for exami-

nation. It appears from a letter received this morning from Dr. Paterson, that it is the corpus luteum which he had figured and described, and from which, and the history of the patient, I had expressed my conviction that it was a false corpus luteum—in fact, nothing but a clot of blood. On first examining the preparation you sent me, I formed the same opinion, and expressed it in the most decisive manner to Mr. Jones: placing, however, much more dependence on his judgment than my own, I was induced to alter my opinion, and coincide with him. If I receive copies of my letters to you, I shall publish the whole statement in the Medical Gazette next week.

I remain,

My dear Sir,

Very sincerely yours,

(Signed) ROBT. LEE.

Dr. Bowman.

4, Saville Row,
6th August, 1844.

MY DEAR SIR,

WILL you have the goodness to inform me by return of post whether or not you received a letter from me respecting the preparation of the corpus luteum, between the 13th and the 22d of May.

I remain, very sincerely,

(Signed) ROBT. LEE.

Dr. Bowman.

Certified to correspond with the originals.

D. CRAIGIE.

22d January, 1845.

It is necessary for me to add a few words regarding the letter of the 13th May, about which Dr. Lee has said so much. Dr. Lee states that no copy of it was sent him. Its date, however, was forwarded to him, and the general tenor of its contents, as well as the fact that it contained no opinion on the preparation. Dr. Lee, possessed of this information, still writes for a letter between the 13th and 22d May, a letter which had no existence. He now, however, says that it was the letter of the 13th May that he all along wanted. To my mind it appears that had Dr. Lee wanted a copy of his letter of the 13th May (with the date and tenor of which he had already been furnished), he would have written for it, but instead he asks for one between the 13th and 22d May, and yet now says that it was the letter of the 13th that he re-

* The letter here referred to was published from a scroll copy, which had been preserved, and without the alterations being noted, which were made in the letter, as sent to Dr. Lee.—R. P.

ferred to. Such conduct appears to me inexplicable, and I leave the reader to draw his own inferences regarding it.

I may state once for all, in reply to various charges which Dr. Lee makes in the communication referred to, that Dr. Bowman, who sent the preparation to him, knew nothing whatever of its history, until after Dr. Lee's opinion on it was delivered, and that the preparation itself was taken out of a preparation jar, where it had been preserved in spirits, wrapped up in clean linen rags steeped in spirits, and put into a tin cannister to enable it to be sent through the post. In this way it must have reached Dr. Lee, for it was never even opened at Monkwearmouth.

Before concluding these short remarks, however, I feel that I owe a statement, by way of apology, to my professional brethren for the means which I adopted to procure the delivery of a candid opinion on the preparation in dispute, from Dr. Lee. For the following reasons I considered myself justified in having recourse to a plan with Dr. Lee that I never would have had recourse to with any other member of the profession; for, 1st, I knew that in 1832 Dr. Lee published in the *Philosophical Transactions* an account of an examination of six gravid uteri and many placentæ, from which he came to the conclusion, "that a cellular tissue does not exist in the placenta, and that there is no communication between this organ and the uterus by means of great arteries and veins;" thus attempting to set aside the well-known opinion of the Hunters. From Dr. Lee's own confession, it appears that he found out his error twelve months afterwards, yet it was not till 1843, or nearly ten years after he was convinced of his error, that he made such known to the profession; during this long interval he allowed anatomists and obstetricians to dispute about the truth of his supposed discovery, while all the time he was already convinced in his own mind that the views he had published were erroneous.

So late even as 1843, we find Dr. Churchill, of Dublin, in his work on Midwifery, using the following sentence: "Lauth, Velpeau, Liller, Coste, Radford, Ramsbotham, Millard, Noble, &c. agree with Dr. Robert Lee." I accuse Dr. Lee, in the name of the whole profession, of wilfully misleading

them on this point. It is of no avail to argue that he stated his change of opinion in 1833, in a review of Velpeau's *Embryology*, in the *MEDICAL GAZETTE*; for the editor stated, in his number for June 21st, 1834, "that Dr. Robert Lee is still pursuing his inquiries on the subject," and adds, "we have not learned that there has been any change of opinion." Mr. Noble, too, repeats with apparent authority the same statement.

2dly, I knew that Dr. Lee, in a correspondence published by him in the *Lancet* of 20th April last, allowed to be appropriated to himself as his own the theory of menstruation of Dr. John Power, and at the same time thus claimed the illustration of that theory which had been privately made to him by Dr. Girdwood, of London.

And 3dly, That in a letter signed Scrutator (and which, with various other anonymous attacks in the *MEDICAL GAZETTE*, most men attribute to Dr. Lee), statements are made which Professor Reid, of St. Andrews, has characterised in the same journal as being "a glaring attempt to pervert the truth."

I confess I have all along regarded the point in dispute between Dr. Lee and myself as of considerable importance; and the means which I used to gain his candid opinion were adopted from my not seeing any other way in which this object could be obtained. Dr. Lee has thus *first* violated his written promise by not publishing a confession of his error in the pages of the *MEDICAL GAZETTE*; and *secondly*, he has publicly recanted an opinion given privately, and under the most unbiassed circumstances.

Having offered these remarks, I leave it to the profession to determine how far the language used by Dr. Lee in his last letters in the *GAZETTE* is justifiable. I shall take no further notice of any communication from Dr. Lee, whether he chooses to attach to it his own name or any anonymous title.

I am, sir,

Your obedient servant,
ROBERT PATERSON, M.D.

Leith, Jan. 24, 1845.

[Here this controversy must terminate.—*Ed. Gaz.*]

SOME OBSERVATIONS
ON THE
MEDICAL TOPOGRAPHY, CLIMATE,
AND DISEASES, OF THE BIGHTS
OF BENIN AND BIAFRA,

WEST COAST OF AFRICA.

By W. F. DANIELL,

Member of the Royal College of Surgeons of
England, &c.

[Continued from p. 586.]

IN most of these countries, live stock, game, &c. may be purchased at comparatively trifling prices, while the greater number of the edible fruits and vegetables that abound in the West Indies and tropical America can be procured without the slightest difficulty. To enumerate the whole would occupy too much space; a reference, therefore, to the most conspicuous productions of one place will serve as a guide for others, since the majority are more or less distributed throughout the other regions of central Africa. With the plants common to the Slave Coast may be included the *Zingiber officinale* (ginger), *Sarcocephalus esculentus* (cotton peach), *Gossypium herbaceum* (cotton plant), *Tamarindus Indica* (tamarinds), *Cucurbita Citrullus* * (water-melon), *C. Melopepo* (squash), *Annona Muricata* (soursop), *Ricinus Africanus* (African Palma Christi), *Chrysophyllum Cainito* (star-apple), *Holcus spicata* (kous-kous), *Jatropha Janipha* (sweet cassava), &c. The *Gossypium arboreum* (cotton-shrub) fur-

nishes the raw material from which the celebrated Jaboo cloths are manufactured. These fabrics surpass the British cotton goods in strength and firmness of texture, but are inferior to them in fineness of execution. The *Zea Mays* (maize) is grown in immense quantities, and is used not only as an article of food, but also of commerce. The *Allium Ascalonicum*, *Brassica Oleracea*, with a few other culinary vegetables, were originally imported from the Cape de Verd Isles and Europe, and have now become naturalized, and are largely cultivated in the gardens of the natives.

The Rio Formosa is better known under its common appellation of Benin River. It commences the series of navigable streams more intimately connected with the Niger, and was, during the last two centuries, a famous mart for the purchase and exportation of slaves. It is now but rarely frequented for such purposes, a more legitimate trade, which had been irregularly carried on shortly after its first discovery, having superseded this traffic in the human species. If we can credit Di Barros, it was either this or the Bonny River which was explored by Alfonso de Aveiro in 1485, in consequence of the king of the country requesting to be instructed in the Christian religion: he also states that an embassy was sent many leagues into the interior to a monarch of the name of Ogane, to whom the kingdom of Benin was at that period tributary. In Hackluyt's Collection of Voyages there is a very quaint and curious description of Benin River, from which we may glean much useful information. It appears that Capt. Wyndham visited it so early as 1553, in company with a Portuguese trader named Antonio Anes Pinteado, for Mallagetta pepper, and from this voyage may therefore be dated the commencement of the English commerce. In 1588, a Capt. Walshe was trading here, and again in 1590; in both these voyages he lost the greater number of his men, but fully freighted his ship with Jaboo cloths, oil, pepper, and ivory. At present very little trade is carried on with the natives, three or four British vessels alone monopolizing its exports, which consist chiefly of palm-oil and ivory.

The term Rio Formosa is of Portu-

* The *C. Citrullus* is highly esteemed by the inhabitants of several African countries for its antiseptic, refrigerant, and antifebrile properties. It may be found in nearly all the cultivated districts on this and the Gold Coast. By the Arabs it is named *Bateekh zieh*, and by the Egyptian Arabs *Barteeck*. It is frequently alluded to in conjunction with other plants belonging to the *Cucurbitaceæ*, in the writings of the Arabian physicians. Rhazes, in a work entitled "*Kitab fil jadrie wal husbab*," &c., says that "*Aqua etiam cucurbitæ et aqua peponis Indi, et aqua cucumeris angurini et mucilago seminum psyllii et his similia*," &c. were remedies advantageously administered in the different stages of both small-pox and measles. Avicenna, in his well-known "*Canon fil tibb*" (Canons of Medicine), mentions several species of *Cucurbita* under the names of *Batiech*, *Batheca*, *Charha*, &c. and recommends preparations of them in various maladies. In Egypt, and other parts of northern Africa, it is resorted to by the common people as a medicine in ardent fevers. "For this purpose they have a variety that is softer and more juicy than the common sort; when this is very ripe, or almost putrid, they collect the juice, and mix with it rose-water and a little sugar."—Loud. Cyclop. of Agric. p. 809.

guesse origin, and signifies in that language, a beautiful river. It has, however, been employed more to characterise the bold and open expanse of water, than any picturesque scenery, unless the wild and desolate forests that fringe its banks be dignified by its assumption. At its junction with the ocean this river is one mile and three quarters in breadth, but as it recedes towards the interior, proportionably diminishes in size, and at Youngtown, a village distant from fifteen to twenty miles from its mouth, divides into three terminal branches, the first leading to Gatto, a small trading port in the kingdom of Benin, the second, a continuation of the main trunk penetrating beyond the Subo country, and taking its source in the mountainous districts northwest of the Quorra, and the third, or last, termed the Warrée or Youngtown creek, that joins the Quorra, a few miles below the town of Ebue.

Northwest head, an extreme projection of the land at the entrance of the river, is situated in $5^{\circ} 46' \text{ N. Lat.}$ and $5^{\circ} 4' \text{ E. Long.}$ Like Cape St. Mary in the Gambia, it may be stated to be the most healthy spot in the river, being fully exposed to the daily sea breeze, and less affected by those pestiferous south-east winds so detrimental to all Europeans who visit here. From this point, a bar of heavy mud and sand extends to Salt-town, on the opposite side, partially obstructing its entrance, and on which, in the rainy season, a tremendous sea breaks with a resonance distinctly audible for several miles inland. A small village named Georges-town is located on this promontory, in close proximity to which may be distinguished many graceful trees, intermingled with the sombre foliage of the mangrove bushes; the most prominent are the *Elais Guineensis* (palm oil tree), *Cocos nucifera* (cocoa nut), *Musa sapientum* (plantain), *Sagus vinifera* (wine palm), *Psidium pyrifera* (guava), &c. A narrow sandy beach, with a substratum of hard black clay, stretches from this place to Fish-town, about a mile up the river. The shore from this place to Jacqua creek is composed principally of alluvial deposits, covered by dwarf mangroves, that project so far into the stream as to conceal its banks; and this is the common appearance throughout the river, except in those localities inhabited by

the natives. At the aperture of the above creek two English factories are erected, in each of which a few white artificers and Kroomen reside, under the superintendence of a head factor. These edifices are commodiously built of wood, somewhat after the Spanish style, and contain a number of apartments on a middle story, elevated above the adjoining swamps. They are five miles distant from the bar.

Jacqua, or Waccos, is the largest town in the kingdom of Warrée. It is erected on the right bank of a narrow tortuous stream, in a low and impenetrable morass, two miles from the river. The population amounts to near four thousand. The diseases to which the inhabitants of this part of the river are subject originate more from the humid and confined atmosphere of the locality in which they live, than from any other cause: their type is usually asthenic, but it is greatly modified by change of seasons, and the prevalence of rains. Syphilis is perhaps the most frequent and fatal of those maladies to which the male inhabitants are liable, and predominates more among them than among the females. Many are cut off very early in life from want of the necessary remedial applications, and it is not uncommon to meet with cases which have continued during nearly two-thirds of the patient's existence. The worst forms of syphilitic disease which have come under my notice, have been the foul and malignant phagedenic ulcers, that indiscriminately attack both sexes. Gonorrhœa virulenta, nodes, cutaneous eruptions, and, indeed, all the sequelæ of syphilis in multiform varieties, are extremely prevalent, and not unfrequently resist the most energetic and judicious treatment of the European surgeon. In the native cure of such affections, superstition exercises her delusive sway; charms, amulets, with other fetish remedies, are employed *ad libitum* by designing priests, whose useless mummeries are calculated to afford but a transitory hope of any other than a fatal termination. The dracunculus, or Guinea worm, is but rarely seen in this part of Africa, being restricted more to the natives of the interior, and the Gold and Windward coasts. Two cases only came under my care in Jacqua-town, in one of which I had an opportunity of witnessing a country operation for the extir-

pation of these vermicular parasites. A small semilunar incision was first made in the skin of the forearm, to expose the extremity of the worm, and moderate pressure used to facilitate its protrusion; it was then seized, and cautiously drawn forth to the extent of one or two inches. Two ligatures, constructed from the exsiccated fibres of some gramineous plant, were next applied to that portion of the worm nearest the orifice in the skin, the other part being nipped off; the extremities of both of these ligatures were of sufficient length to encircle the limb, round which they were fastened. A young plaintain leaf, smeared over with palm oil, was then placed over the wound, and friction carefully employed with the same oleaginous fluid on the skin, along the course of the worm. This process was daily performed, and a small portion of the worm regularly exposed, until the whole was gradually withdrawn; a perfect cure being the result.

On the environs of Jacqua are several enclosures for the cultivation of the *Dioscorea bulbifera* (yam), *Hibiscus esculentus* (ochro), &c. The *Citrus lim.* (lime), *Jatropha manihot** (bitter cassava), *Capsicum annuum* (common pepper), *Musa paradisiaca* (banana), &c. and several huge trees belonging to the *Mulvaceæ*, occasionally intersprinkled with the *Pandanus candelabrum* (chandelier tree), may be observed amid the mass of human habitations that line both sides of one long avenue or street, which in the rainy season is partly inundated with water. Throughout these swampy regions an apparently ceaseless growth of the *Rhizophora mangle*

(common mangrove), effectually conceals most objects that exist in their immediate vicinity. They constitute two-thirds of the vast forests that clothe the maritime lowlands of equatorial Africa.

The same low and unhealthy tract of country, with two or three intersecting creeks, extends for some distance beyond Reggio, an insignificant village attached to the kingdom of Benin. It is situated on a central point of land at the confluence of the Gatto creek with the river. The intrepid traveller, Belzoni, to whom we are so much indebted for the interesting researches into the antiquities of Egypt and northern Africa, expired at Agatto from an attack of dysentery, after an abortive attempt to penetrate into the Hausa country. His solitary grave on the outskirts of the town may still be seen; an elevated mound of earth, overrun with weeds, with the fragment of a decayed wooden cross, are the only traces that now indicate the spot. Above Reggio the continuation of Benin river bends east-north-east, and about forty miles from the sea bifurcates into two branches, both of which were first explored by the enterprising Mr. Becroft in 1840, who has satisfactorily proved that they had no communication with the river Quorra, as had been previously supposed.

The Subo country consists of an extensive series of fertile plains, thirty miles above Reggio, beautifully ornamented with park-like clumps of trees, and verdure of the freshest tint. The plantations of the natives for the production of yams, plaintains, cassava, &c. occupy the inferior districts, and enjoy a high reputation for salubrity, inasmuch as most invalids resort there in all protracted cases of sickness, and generally with most favourable results. From the purity of the water of the river as it flows through these regions, it has been selected to provide for the wants of the homeward-bound vessels, which are often in the greatest difficulties from a deficiency in this necessary article.

[To be continued.]

* From this plant is prepared manioc or mandioca, an article of food constantly used on board the merchant vessels for the feeding of live stock. The natives designate this preparation by the word *Farina*, originally introduced by the early Portuguese traders, and derived from the Brazilian term *Farinha de pau*, or meal of wood. In Benin and Warri, when any great dearth of vegetable food prevailed, it was given to the slaves, and is now occasionally consumed by them. Europeans ought to avoid partaking of it in any form, since it is apt to create, even when taken in small quantities, colic, diarrhoea, and other distressing symptoms, and finally brings on dysentery. Formerly, when any difficulty existed in obtaining provisions for the slave ships, farina, from its abundance, was employed as a substitute for the support of their human cargoes. From its being very hastily and imperfectly made, the consequence was, that, before two-thirds of the voyage had been completed, nearly one-half of the wretched beings confined in these floating prisons perished from dysentery, and other enteric affections.

ON THE USE OF SULPHATE OF MANGANESE IN VARIOUS DISEASES.

By R. H. GOOLDEN, M.D.

Fellow of the Royal College of Surgeons, Physician to H.M.S. Dreadnought, and Assistant Physician to St. Thomas's Hospital.

(For the *London Medical Gazette*.)

AN article published in the *MEDICAL GAZETTE*, Nov. 8th, of the past year, entitled "Researches on Gout," by a gentleman eminently celebrated for his knowledge of chemistry, and his application of that knowledge to pathology and therapeutics (Mr. Alexander Ure), called my attention to the use of the sulphate of manganese. This salt has given some marked results affecting the biliary secretions in a remarkable degree. Under the impression that it may make a useful addition to our Pharmacopœia, I have been induced to offer you the results of my experience in its use, claiming no further merit in its introduction than an honest desire to test the truth of Mr. Ure's suggestion by such experience as has been afforded me. When taken upon an empty stomach, in doses of one or two drachms, it has invariably produced vomiting in less than three hours, and generally within an hour; and the matter vomited has consisted of a very large quantity of yellow bile. After a meal, the same effect has taken place, but not invariably.

It very rarely acts as a purgative alone, and after it has been exhibited for several days, I have often been obliged to have recourse to other purgative medicines, in consequence of the want of action of the bowel. After the first dose it seldom acts as an emetic. The appetite has invariably increased during its exhibition, and when the first emetic effect has subsided the patient is free from all uneasy sensations, and expresses himself as feeling lighter and easier than before.

It sometimes leaves a bitter taste in the mouth, which is all that is complained of until the patient vomits.

The stools, which are sometimes dark coloured, soon become yellow and loaded with healthy bile; but if its use be continued for four or five days, they become lighter, and at length shew a total absence of bile, appearing like

jaundiced stools of the colour of parchment, but there is no jaundice either in the skin or urine.

If the medicine be discontinued, the yellow colour of the stools returns.

In one case which was admitted into the Dreadnought with jaundice, and which subsequently died from inflammation of the spleen, with tubercular deposit in that organ, the jaundice very much subsided under the use of the medicine. The liver was healthy, but paler than natural; the gall-bladder quite empty, and the spleen very much enlarged, softened, and loaded with huge masses of tubercles.

I have subjoined a few of the Cases illustrative of the action of the medicine, selecting only those portions of them which have immediate reference to the use of the sulphate of manganese.

George Ashlee, æt. 34, admitted for periosteal pains, with large nodes on the shin bones, elbows, and frontal bone: treated with Iodide of Potassa and Opium. He had taken large quantities of mercury in the West Indies for disease of the liver.

After taking his medicine for fourteen days, he lost all his pains, with the exception of the right shoulder, which was so severe that he could hardly move his arm; there was much tenderness at the acromion process; he was blistered, and had an issue, which did not appear in any degree to lessen this pain.

January 6, 1844.—Under the idea that the pain was connected with the liver, he was

Ordered—5ij. of Manganisæ Sulphas in Oss. of water in the morning.

He vomited a quantity of pure bile an hour afterwards, and the pain in the shoulder completely left him.

A lady had been under my professional care at various times, since January 1841. Her sufferings were in connection with derangements of the liver and bowels.

When not taking medicine, the bowels were confined, and the evacuations dark coloured and scybalous. She was seized at various intervals with excruciating pains, like the paroxysms of gall-stones. No gall-stone has ever been seen, although carefully searched for. She has been severely jaundiced four times, and this has always hap-

pened after taking some form of opium, or other narcotic, which I have found it necessary to avoid unless the paroxysms have been unusually severe, as her recovery was always protracted by opiates in consequence of their affecting the functions of the liver.

These paroxysms are often preceded by a slight yellowness about the eyes and face, flatulence and loss of appetite, nausea, headache, a sense of weight or burning in the right hypochondrium, and with pain or numbness in the right arm.

Since her illness she has become very thin, although in that respect much improving for the last six months, and for the same period has suffered much fewer attacks of spasm. I should mention, that she has occasionally had severe rheumatic pains in the muscles of the chest and abdomen, attended with considerable lithate of ammonia deposit in the urine. The lithic acid diathesis is constitutional. The treatment which has been adopted has been to keep the bowels open, changing the aperient from time to time—*Infus. Sennæ*, with *Magnes. Sulph.*; *Pulna water*; small repeated doses of sulphate of soda or magnesia, compound decoction of aloes, or pills of the watery extract of aloes (*Copeland's Aloetic Pill*), and occasional doses of calomel and blue pill, which were sometimes repeated for several times, until the bilious colour in the stools was produced. The nitromuriatic acid, both as a wash, and given in mixture, with various bitter tonics; but the only bitter that did not derange the stomach was salicine. The *vinum colchici* was used at various times with marked benefit, given in the solution of bicarb. of magnesia. She was generally very tolerant of this medicine, but on one occasion it produced some inflammatory state of the bowel, that made me very unwilling to recur to its use, for the smallest quantity of laudanum always produced obstruction in the liver.

In November she had a very severe return of the paroxysm, which lasted for eight hours, and the following day a recurrence, which continued twelve hours. No opiate was given, but carbonate of soda dissolved in a large quantity of warm water, on account of the vomiting, which it generally allayed, and warm fomentations to the stomach.

After the subsidence of the second

attack, the bowels remained constipated, and several doses of five grains of calomel, followed by sulphate of magnesia and senna, and the *Pulna water*, brought away a quantity of scybala, and kept the bowels freely open; but the stools were very dark-coloured and loose, and she began to suffer severely from the prolapsus, which induced me to discontinue the use of purgatives for a time, and she was very feeble and depressed, and complained of burning sensations in the right hypochondrium. After several days I ordered—

5j. of *Manganesiæ Sulph.* in ℥iv. of water to be taken in the morning.

In about half an hour afterwards she vomited Oj. of pure yellow bile, and during the day had three copious motions, the last two of which were quite yellow. I saw her in the evening, when she said that all her uneasiness had left her, she felt in good spirits, and had a good appetite. The manganese was repeated in smaller doses of ʒss. twice a week for a few weeks; no sickness followed. She left town for the sea side, and has had no return of her bilious attacks since, and is considered by herself and friends to be in good health.

We must not here attribute too much to the effects of the sulphate of manganese, as the patient had been improving in health for some time previously; but the immediate effects of the drug were clearly marked, in producing the copious flow of bile, which calomel had failed to do, and it is to be observed that no mercurial had been given for three days previous to the dose of manganese.

Edward Day, æt. 24, admitted November 16th, with icterus of two weeks' standing.

Nov. 20th.—Not much general indisposition; improved since admission. Some tenderness under the ribs on the right side. Nausea and vomiting were present a few days ago, but have now ceased, and there is a return of appetite. Bowels moving once a day; stools hard and white. Took the first dose of *Mangan. Sulph.* this evening. Vomited in twenty minutes after; the matter was greenish and very bitter. Nausea continued through the night.

21st.—2d dose early in the morning. Nausea, but no vomiting or action on

the bowels. 3d dose again produced only nausea.

22d.—4th dose (increased to two drachms) induced vomiting in ten minutes, but no nausea remained after. No stool now for 48 hours.

Haust Ricini.

5th dose: bowels moved twice in the night; character of stools not ascertained.

23d, 6th dose.—Was sick, and vomited a little; remained sick till the middle of the day. The manganese was now suspended. The pulse, which before had been little more than 60, rose to 117; and he complained of severe pain in the head. Bowels confined.

24th.—7th dose in the evening.

25th.—8th dose; which caused no pain or vomiting, but very great nausea, lasting till evening. One thin yellow evacuation.

Suspend the medicine.

26th.—Much worse; very dull and stupid; severe pain in the head; delirium; no vomiting; one dark stool.

27th.—In the same state. Bowels freely evacuated; stools of a soft consistence, becoming pale again. The skin of a deeper yellow.

The cerebral symptoms continued, with some temporary remission, till the 9th of December, when he died.

There was no trace of disease in the liver, gall-bladder, or ducts. The chief lesion was tubercular deposit in the substance of the spleen, which was large, weighing 27 ozs., and softened.

Robert Lawrence, æt. 45, admitted Sept. 9th. Pains in right knee and foot, right shoulder and elbow; no swelling, nor heat. At present (Nov. 20th), joints feel cold to himself. Shifts about to different joints, sometimes in one joint only, with swelling; sometimes in half a dozen, without swelling. Has been in this state twelve months. Appetite very poor; no nausea or pain after eating; bowels free and comfortable.

Nov. 21st.—At 6 A.M. took Mangan. Sulph. 3j. having an empty stomach, and having taken but little for four days. In an hour felt very sick, and vomited a little thin, mucous fluid, greenish-brown, intensely disagreeable, bitter-sour-salt—a compound of bad tastes. No pain in the stomach; no retching; nausea soon went off; slight

headache after; no action of the bowels. This was the second dose; the first, last evening, produced no effect. In the course of the day, one copious dark stool.

22d.—Has taken a 3d and 4th dose without any nausea or action on the bowels. Appetite improved by the medicine.

23d.—This morning, after the 6th dose, one copious dark stool.

24th.—Slept well last night, the first time for three weeks. Appetite much improved; pain chiefly confined to the foot, not troublesome when at rest.

26th.—Has taken eleven doses now. Was purged three times in the night; stools thin, and very white, like parchment. Very little griping; no nausea.

Medicine suspended.

Robert Drewett, æt. 58, admitted October 8th. At the time when he commenced the use of the manganese, he had been suffering seven months from rheumatism. At that time there was pain, swelling, and thickening about the right wrist and fingers, with immobility of several of the articulations, and a good deal of heat occasionally. More or less affection of the elbow and shoulder of the same side.

Nov. 29th.—After the 1st dose (3j.), yesterday evening, he had four thin stools, the colour of which he did not ascertain. Some griping. 2d dose this morning. One thin and pale-yellow stool. Griping and nausea; no vomiting.

Dec. 1st.—After the 4th dose he had three pale-yellow stools. Nausea, which continued all last night. Bowels free again all to-day. Pains the same.

2d.—Bowels rather confined. No pain at the stomach, but slight nausea.

Ol. Ricini, 5vj.

The medicine appeared to have no influence on the arthritic affection, and was therefore discontinued.

William Western, æt. 42, from Angina. Admitted Nov. 15th, with pain, heat, and swelling in the left wrist; pain in both ankles, and painful swelling, with much heat and tenderness in the ball of the fifth toe of right foot. Has been cook during his last passage; and before that, for eight or nine years, was steward. Feverish; furred tongue; constipation; vomiting frequently after small quantities of food. Catarrhal affection also.

On the 20th, the constitutional disturbance having abated under venesection, purgatives, and low diet, he was ordered Manganessii Sulph. 3j. bis die, ex Aquâ Menth. Pip.

21st.—1st dose last evening; bowels moved twice in the night; very copious feculent evacuations, of a brown colour, tolerably natural. 2d dose, this morning, before breakfast. Vomited very shortly after breakfast; the matter ejected was yellow, and very bitter, the taste persisting in the mouth for several hours. Pains much the same.

22d.—Has taken a 3d and 4th dose without vomiting or nausea, being exhibited about half an hour after eating, instead of when the stomach was empty. Two thin and dark evacuations. Pains better.

23d.—After the 6th dose this morning vomited very shortly; nausea continued for several hours after, and belly became sore and uneasy. Two evacuations. No pain in the joints.

To suspend the Manganese.

From this time there was no acute articular pain, but much stiffness. The soreness in the belly did not disappear till the 27th, after which the bowels became a good deal constipated.

In this case the acute articular affection had only existed for three days before admission.

William Gunn, æt. 40: admitted Nov. 11th. Subacute articular rheumatism. On the 16th Nov. he commenced the Sulphate of Manganese in drachm doses thrice a day. He had then suffered from affection of the left arm and shoulder, and of both knees and ankles, for nineteen days. There was, on admission, swelling and heat about the joints, but this had subsided. He now complained of pain and stiffness in them; the feet swelled after exertion.

Nov. 21st.—Took the 1st dose last night, which caused nausea for an hour; 2d dose caused a greater degree of nausea, and lasted for a longer time; no vomiting. In the course of the day passed one semi-fluid, copious, and very dark stool.

22d.—3d and 4th dose; no nausea, vomiting, or purging; pains worse, owing to the cold weather; appetite improved since he took the medicine.

23d.—5th and 6th doses; no nausea or purging; pains the same; increase the dose to 5j.

24th.—7th dose; no nausea; bowels not free for 48 hours: 8th dose; appetite good.

Pil. Cathart. gr. x.

25th.—9th dose; one copious natural evacuation; 10th dose; pains a little better.

27th.—Bowels move once a day; stools thin and brown, not very dark; pains in the knees and feet worse, probably owing to the cold weather.

28th.—Four thin and brown stools in the last 24 hours; pains worse.

29th.—Two stools; joints swollen again. After this the manganese was continued one or two days longer, without any appreciable affection of the disease, though it decidedly improved the appetite. He now began to suffer from venereal ulceration of the uvula, and the manganese was replaced by the iodide of potassium.

8, John Street, Adelphi,
Feb. 6, 1844.

ANALYSES AND NOTICES OF BOOKS.

“L'auteur se tue à allonger ce que le lecteur se tue à abréger.”—D'ALEMBERT.

Elements of the Comparative Anatomy of the Vertebrate Animals, designed especially for the Use of Students. By RUDOLPH WAGNER, M.D. Professor of Comparative Anatomy and Physiology in the University of Göttingen, &c. &c. Edited from the German by ALFRED TULK, Member of the Royal College of Surgeons, of England. London: Longman and Co. 1845.

RUDOLPH WAGNER, Professor of Physiology, Comparative Anatomy, and Zoology, in the University of Göttingen, was born at Baireuth, in the year 1805. He displayed at an early period a marked predilection for the study of natural history. After taking the degree of Doctor of Medicine at Würzburg, in 1826, he repaired to Paris, where the greater portion of his time was spent in the Garden of Plants, of which the illustrious Cuvier was then the presiding genius. He subsequently visited the coasts of Normandy and the Mediterranean; was zealously engaged, during several months' residence in Marseilles and Nice, in investigating the zoological relations of the lowest

classes of organized beings. From Nice he sailed to Sardinia, where he pursued those curious researches concerning the osseous breccia, which were afterwards submitted to the Academy at Munich. In the year 1840, he was appointed to the chair at Göttingen, as a meet reward for his labours and talents. On none other could the mantle of the venerable and distinguished Blumenbach have more aptly fallen. His works are no less remarkable for perspicuity of arrangement than for practical import. The one before us, which reflects great credit upon Mr. Tulk's editorial qualifications, evinces a thorough knowledge of the subject. As an elementary treatise, it cannot fail to supersede the now obsolete manual of the author's predecessor. In short, after careful perusal, we have no hesitation in recommending it to every student desirous of gleaning information regarding a collateral department which has served to clear up many of the dark and hidden things in physiological science.

The following extract exemplifies certain peculiarities touching the venous system :—

“Valves occur in the *Veins* of the body, and frequently, even as in the Ox, in the portal veins, where they are wanting in Man. The trunk of the superior vena cava is very frequently double, in individual animals from all the orders, as in the common Bat, Hedgehog, Squirrel, Ornithorynchus, Elephant; as a rule, however, it is single, as in the Apes, Ruminantia, most Carnivora, &c. The inferior vena cava is commonly dilated in diving animals, previous to entering the heart, and while yet within the liver, as in the Seals; in a less degree also in the Dolphin and Otter, still less so in the Beaver and Ornithorynchus; in these it forms a true sinus like that of Fishes. This large size of the veins, in relation to that of the arteries, exerts unquestionably an important influence upon the circulation and the process of diving; and the discovery is a remarkable one, of a peculiar annular muscle, about an inch in breadth, which is met with in the Seals on the trunk of the inferior vena cava, above the diaphragm and venous sac, and which can cut off the return of blood to the heart. In the Cetacea remarkably developed ve-

nous plexuses occur; one of these lies, *e. g.* in the canal formed by the inferior spinous processes of the tail; another, much more conspicuous (*plexus iliacus*), lies between the psoas muscle and the peritoneum.”

It has been surmised that in certain diseased states the urinary organs and the liver are so closely dependent upon each other that the functions of the one might sometimes supply those of the other. That they are intimately connected is illustrated in the instance of reptiles which “possess a double *Portal system*, one for the liver, and one for the kidneys, and both of these exhibit somewhat different relations in the several orders. In the frog the veins of the intestinal canal of the spleen, &c. concur to form the vena porta of the liver; those of the abdominal coverings, the urinary bladder, and partly of the posterior extremities from the portal vessel of the kidneys, while the efferent veins from the latter organs constitute the trunk of the posterior vena cava, into which the blood returning from the sexual organs and liver is poured; some of the veins of the abdominal parietes empty themselves into the umbilical vein.”

Subjoined is an account of the poison glands of the Ophidia :—

“The poison-gland corresponds in some measure with the parotid salivary gland, and agrees most strikingly in situation with the latter in the Venomous Serpents, having posterior venom-teeth, *e. g.* Dipsas, Homalopsis, where it lies more freely, not invested by any fibrous tunic, and has a short excretory canal. In the typical Venomous Serpents, as Vipera, Naja, Crotalus, Trigonoccephalus, the poison-gland is situated more behind and beneath the eye, consisting of short tubes in Naja, or of hollowed ramified lobules (Trigonoccephalus), and is surrounded by a dense, mostly double fibrous sheath, this again being covered by a layer of muscular fibres, which proceed partly from the temporal muscle, and serve to compress the gland and force its contained secretion into the excretory duct; the latter courses along the external surface of the superior maxillary bone, and enters an opening placed at the root of the poison-tooth. The situation and structure of the poison-gland is similar in the Aquatic Serpents (Hydrus and Hydrophus). This gland occurs in an

unusual situation in *Causus rhombeatus*, being ensiform, situated in a channel-like cavity, and extending to the 18th or 19th vertebra, so that it reaches over more than a seventh part of the whole length of the body; its excretory duct extends from the poison-tooth to behind the quadrate bone. The ejection of the poison into a living animal is accompanied by peculiar and frequently fatal effects."

One of the most interesting chapters in the whole book is that upon the organs of voice and respiration in birds. After demonstrating in a very lucid manner the mechanism of the superior larynx and trachea, the author passes on to describe the *inferior or bronchial larynx*, in which the voice is produced, and which constitutes a special peculiarity of the class. This, from the very extensive series of modifications it presents, necessarily offers a wide field for inquiry. In singing-birds, and those birds generally which are provided with what is called a true *muscular vocal apparatus*, including the ravens, from the power they possess like parrots of imitating the human voice, the inferior larynx is highly complicated. As a general rule, the singing-apparatus is made up of five well developed pairs of muscles, very strongly marked in the nightingale and other small singing birds.

"Two anterior and three posterior pairs of muscles may be distinguished as belonging to the inferior larynx. In front a long elevator muscle (*m. levator anterior longus*) arises tolerably high up from the trachea, and is firmly attached to the second bronchial demi-ring, the anterior extremity of which it draws upwards and outwards, and so widens the larynx. In like manner the transverse elevator (*m. levator anterior transversus*) arises in front, but obliquely, from the external part of the superior border of the tympanum; it proceeds in the direction forwards, and is attached by its inferior extremity to the anterior part of the second and third bronchial demi-rings, and to their interjacent membrane; elevating and drawing these parts also in the direction outwards. By both of these muscles, as well as by the *m. depressor tracheæ s. sterno-trachealis*, which arises externally from the tympanum and passes forwards to the border of the sternum, the cavity of the inferior larynx is

shortened and dilated. The *membrana semilunaris* and the *ligamentum vocale externum* will be also synchronously stretched in a variety of ways by the action of these muscles, joined to that of the three posterior pairs, the description of which will now occupy our attention. The posterior long elevator (*m. levator posterior longus*) arises high up behind the corresponding anterior elevator muscle, and is inserted posteriorly into the extremities of the second bronchial demi-ring, which it draws upwards, and at the same time rotates the third. The posterior short elevator (*m. levator posterior*) is partly covered by the former muscle, but is situated more in the direction backwards and inwards, and at its origin from the upper part of the tympanum abuts closely against its fellow of the opposite side, and is attached higher up to the posterior extremity of the first bronchial arch, which it serves to elevate. The fifth pair of muscles is situated between the posterior long, and the anterior transverse, elevator, and is called the oblique elevator (*m. obliquus posterior s. rotator posterior*); it arises externally from the superior border of the tympanum by a short and thick muscular belly, passes obliquely backwards, and is inserted into the posterior extremities and lower border of the second bony arch, which it rotates and draws in the direction outwards."

The trachea here consists of a short bony tympanum or drum, constituting its inferior extremity, and usually formed by the early coalescence of three rings. The tympanum is divided as usual inferiorly by a transverse or cross bone. From the superior border of this the semilunar membrane of Savart rises. This membrane is of essential importance to the production of song, or the power of uttering articulate sounds; since when it is absent or slightly developed the voice is feeble or has but little variety of tone.

The voice of birds appears, like that of the human subject, to be produced by the combined vibrations of the laryngeal membranes and the tongue. The flute-like tones of the singing birds are doubtless, observes our author, accomplished by a vibration of the whole column of air while passing through the trachea.

MEDICAL GAZETTE.

Friday, February 14, 1845.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

GENERAL LEGISLATION NECESSARY.

At a special meeting of the members of the Liverpool Medical Reform Committee, and of the Local Council of the Provincial Medical and Surgical Association, held upon the 6th current, for the purpose of considering a communication received from the Society of Apothecaries in London, it was resolved unanimously—

"That this meeting, although sincerely desirous of co-operating in any measure calculated to elevate the position of the general practitioners, considers that, in the present stage of medical affairs, it does not possess sufficient information to form any decisive opinion on the subject.

"This meeting has every confidence that, in the amended Bill of Sir James Graham, the interests of the general practitioners will not be lost sight of; while it is not prepared to decide whether those interests would be best consulted by including the general practitioners in the Charter of the College of Surgeons, or by a separate and independent incorporation."

We regard the above as a very significant document at the present juncture. It conveys the sentiments of our medical brethren in Liverpool—a town which ranks next to London in commercial importance.

We have no hesitation in affirming that in the amended measure of the Right Hon. Baronet the interests of the whole profession will be most carefully considered, and that means of protection will be afforded to the public which no mere corporation could ensure. The practitioners of Liverpool have therefore done wisely to pause before sanctioning any scheme which

might possibly tend to impair the usefulness and respectability of the body to which they belong.

We would say to the general practitioners of England, that if they are bent upon their destruction, they will persist in demanding a charter, which probably would not be withheld if they persevere in urging their claims with unity and concord. We admit their perfect right and title thereto; that, indeed, we never disputed; but we have unflinchingly raised our voice against it as a thing imminently perilous to their interests and well-being. We are swayed by no party motives; we have only at heart the dignity and respectability of the profession at large, to uphold which ever has been, and shall be, our earnest and strenuous endeavour.

We are fully sensible that there are at the present time debasing and detrimental influences operating both from within and from without, which must needs be checked and, if possible, exterminated*. But we are loth to believe that partial legislation for one class alone would be an appropriate remedy: we maintain, on the contrary, that it would tend merely to promote dissension, and retard the progress of medical knowledge.

We are anxious for the establishment of a governing board in connexion with the State, with the Minister

* A most glaring illustration of the low pass to which things have come is instanced by the proceedings of some hapless sons of Esculapius at Glasgow. It appears that no less than twenty-seven surgeons attached to friendly societies for the poor, volunteer attendance and medicines at the rate of *thirty pence a-year* for each member, and have issued an intimation that their private patients can be attended on the same economical terms. This circumstance justly gave rise to the gravest suspicions as to the character, skill, and medicines of these "society doctors"; and in consequence of a requisition presented by 118 practitioners to the President of the Faculty of Physicians and Surgeons, a numerous meeting of the medical profession was convened, in which their disgraceful conduct was very properly exposed and denounced. Does not the above fact betoken a necessity for scouring our ranks of the under-bred, half-educated hucksters with which they are overrun and polluted?

of the Home Department, which shall take cognizance of all branches, including medicine, surgery, and pharmacy. Let one uniform standard of medical and surgical qualification be required of every candidate for practice throughout the United Kingdom; and let a sound preliminary education in science and literature be an invariable prerequisite. The restrictive means, together with the system of registry about to be introduced in the forthcoming Bill, will afford the best bulwark against the encroachments of the ignorant and incompetent. Thus the community, as aforesaid, will be protected, and the character of the profession exalted. If adequate restraints are enforced in the law, a profession which is before the public, and where every one can judge of the individual as he produces himself, for a much stronger reason ought they to be in the profession of physic, which is a domestic art, and practised *coram non judicibus*. In the one there is ample guarantee for a man's conduct and skill, in the other none, so far as the public is concerned. Yet the former simply involves the rights of the person and of property, while the latter has to do with the healths and lives of her Majesty's lieges.

It is understood that in the event of Sir James Graham's Bill passing into a law, a supplementary measure respecting the sale of drugs will without delay be submitted to the consideration of parliament. If the statement recently put forth by a member of the Pharmaceutical Society* be correct, something of the kind is rigorously called for in this "drug-damned" country of ours. The writer hazards the assertion that

in no land in the civilized world is the science of pharmacy in so low a condition as in that of Great Britain; and nowhere is the systematic sophistication of drugs, chemicals, and pharmaceutical preparations, carried on so extensively, and with so much impunity. Had he taken a trip across the Atlantic, we think he would have found the parties in the United States rather ahead of our compatriots in this particular. According to the writer, the Pharmacopœia is a dead letter, a sort of obsolete code more honoured in the breach than the observance, "for it is tacitly permitted, and justly so, to deviate from the directions laid down therein, in the preparation of chemical compounds whose constitutions are the same, independently of the processes followed in their manufacture; and it is also notoriously the custom amongst the Pharmaceutists almost invariably to depart from the instructions given, in the preparation of those bodies which do not possess a definite constitution, and which are mostly of animal and vegetable origin."

We are sorry to hear this, because the Examiners at Apothecaries' Hall have uniformly insisted that their candidates should evince a practical knowledge of that "obsolete code." While on this subject we would recommend there being one general pharmacopœia for the United Kingdom. Having three pharmacopœias as at present is quite preposterous, and often perplexing.

After animadverting upon certain malversations of the craft, the writer avers that such could not occur in France and Germany, where the chemists and druggists are infinitely better educated, and subject to periodical visitations by qualified persons appointed for the purpose of ascertaining the quality of, and the means employed in the preparation of the remedial agents ordered by the pharmacopœia. We are inclined to

* "The Pharmacopœia a Dead Letter; or, an Exposure of the Systematic and Fraudulent Adulteration of the Preparations of the Pharmacopœia, with Suggestions for its Prevention. By William Bastick, Member of the Pharmaceutical Society, and late a Student at the University of Giessen."

ascribe more of the improvement in the above countries to the system of education, than to the mere inspection of apothecaries' ware. The plan of examining the shops, formerly carried into effect three times a year by the censors of the College of Physicians, assisted by the Wardens of the Apothecaries, was looked upon as a solemn farce, and eventually abandoned. Indeed, from the manner in which it was executed, it proved totally inefficient in preventing the sale of falsified drugs. We think the Pharmaceutical Society deserves great credit for the efforts they have made, as regards instruction; but more is wanted before they can assume a proper footing.

Every person in short, to practise pharmacy should be licensed by the above mentioned governing board, after due examination, and be all times thereafter amenable to its jurisdiction. The following is the writer's proposal—

“Let the pharmacist have a position in any scheme of medical reform; but let it be well defined. Let its tendency be not to make them bad medical practitioners, but skilful pharmaceutical ones. Let its object be gradually, if not at once, to wean general practitioners from the practice of pharmacy, and chemists and druggists from that of medicine. Then the progress of education, and consequently of respectability, will diminish the desire to adulterate, and increase the means of detecting such adulterations.”

Were chemists and druggists alive to their own interests they would lower the charges for preparing, compounding, and dispensing physic. The present prices are quite exorbitant, and have operated as a great obstacle to medical men prescribing. Most general practitioners, we are persuaded, would willingly alter their system, and receive a moderate fee for their visits, provided chemists were ready to co-operate, and be content with smaller profits than they at present exact. Were this the case, we have no doubt the latter would

increase their business four or five fold. We do not wish to dictate the rate at which any man should dispose of his corporeal exertions, but we are satisfied that some compliance with the above suggestions would prove beneficial to all parties.

MOVEMENT IN THE PROFESSION.

WE have received the copy of a memorial lately addressed to Sir James Graham by the Gloucestershire Medical and Surgical Association. The memorialists express unfeigned thanks that Government should have undertaken the important yet difficult task of amending the present anomalous and defective state of medical practice, and that Sir James should have afforded the profession an ample opportunity for considering the measure previous to its discussion in Parliament. They acquiesce in the principal provisions of the Bill, but are of opinion that the constitution of the Council of Health needs further consideration, inasmuch as the great body of medical practitioners are not duly represented. They trust that the principles of protection against unlicensed practitioners may be more extensively applied than was apparently contemplated; that stamps and patents to medicines be withdrawn; that quack advertisements be prohibited; that all persons undergo the same preliminary education; that some fixed period for medical studies be required of the general practitioner; and that the age for admission into the profession be at least 22 years.

A circular has reached us from the Association of General Practitioners in Medicine, Surgery, and Midwifery, dated February 11th, 1845, wherein the Committee point out the necessity of the general practitioners in the country earnestly entreating the members of Parliament of their respective localities to oppose, by every constitutional means, any Bill for the regulation of medical practice which does not embrace for the general practitioner the principles of medical reform contained in the “Suggestions for Heads of Charter,” which were presented to Sir James Graham previous to the opening of Parliament.

OBSERVATIONS

ON THE

PRACTICE OF MIDWIFERY

HAVING BEEN CONSIDERED AS A CAUSE
FOR PRECLUDING ITS PRACTITIONERS
FROM THE HONOURS OF THE COLLEGE
OF SURGEONS.

To the Editor of the Medical Gazette.

SIR,

It is very difficult to understand why the practice should so exclude, because midwifery is essentially surgery, and there are no other duties in surgery more important as regards the preservation of life or the interests of society. Even when nature performs the operation in the easiest possible way, the assistance required is purely surgical—it is manual. What are the more important aids required? The changing the position of the child in utero, when it is found to be such as to preclude the operation being finished by nature; *therefore* involving the death of the mother and the infant: here a manual operation of no small difficulty is to be performed, and much depends on the time at which, as well as the manner in which, it is performed, as to the safety of *both* lives. In cases of puerperal convulsions, in cases of flooding, in cases where the growth of tumors obstructs the delivery, in cases of deformity of the pelvis, in all these the aid required is essentially surgical; and in the practice of surgery there is no situation which requires more judgment, more decision, more mental firmness, than in the latter, when it becomes the awful duty of the surgeon to decide at what period of time he is justified in destroying the life of the infant, to ensure the safety of the mother, whose life also may be placed at hazard by too long delay, arising from a humane desire to save the child—the operation, dreadfully painful to the feeling mind, is also sometimes effected with great difficulty, even after the privation of life; (I once saw it fail, where three able men were present, from the inconvenient size of the child.) I ask, is it not strange, that the practice and performance of duties so important, *so purely surgical*, and so dependent on anatomical knowledge, should have excluded its practitioners from the honours of the profession, whilst the College have certified them to be competent to practise in all its branches? Is it not rather matter of surprise and reproach, that at the public examinations for diplomas, no one is ever questioned as to the knowledge of this (as I have shown) most important part of surgery? Is it not an anomaly, that the extending the usefulness of the principles, in which he was examined, should lessen his rights? Midwifery, then, partakes as essentially of surgery

as of the practice of medicine; it is a natural combination of the two, and no man is qualified for it unless he be a *good surgeon*; so is it manifestly an injustice, that the practice of it, so useful to others, should be injurious to his interests! I will add, that although exclusion be, or was, denounced against the *general* practitioner, there is not a surgeon, from the sergeant-surgeons, to the humblest, who *professes* to be purely a surgeon, who does not *willingly* pocket fees for advice, not in cases of medical surgery, but in cases belonging purely to the physician. This is done covertly, the other openly, and I believe it can scarcely be avoided, but it shows the impropriety of the exclusive system.

One word more: the requiring old practitioners to undergo examination is absurd. They were formally declared “able to practise their art,” and is it supposed that time and experience lessen their fitness? They rub off the technicalities which are used in examination, but render themselves fitter practitioners.

SENEX.

REMARKABLE CASE OF POISONING WITH ARSENIC.

BY PROFESSOR WÖHLER.

THE suspicion that the widow * * * residing at * * *, three times married, had poisoned her two last husbands, gave occasion to their corpses being exhumed and subjected to chemical investigation. The presence of arsenic was most undoubtedly discovered in both. The greatest quantity was found, however, in the body of the second husband, although it had lain seven years in the grave. This affords an additional proof of the possibility of detecting arsenic after a long period has elapsed, and merits attention on that score.

In order to get at the arsenic, the whole of the soft parts were dried and burnt along with nitre, a procedure preferable to the French method of carbonizing by means of oil of vitriol; inasmuch as by the employment of the latter minute portions of the arsenic may escape, in the form of volatile chloride of arsenic, when chlorides of sodium or ammonium happen to be present in the corpse.

It deserves notice in a medico-legal point of view, in reference to the comparatively small quantity of arsenic traced in the body of the last husband, who had died six months previously and after protracted illness, that he had taken for many weeks before decease, by way of medicine, phosphorized oil in the shape of emulsion, and had thus consumed 16 grm. of phosphorus. On examining the stock of phosphorus in the apothecary's shop where the prescription had been made up, it was found contaminated therewith,

and containing not less than half a per cent of arsenic.

Independently of all medico-legal considerations which this case involves, it shows the necessity for testing phosphorized drugs for arsenic. For this purpose the phosphorus ought to be melted, and then briskly agitated while molten with a mixture of chromate of potash and sulphuric acid, in order to remove any arsenic. Another point to determine was, whether arsenic is really held in solution in the pharmaceutical preparations of phosphorus.—*Liebig's Annalen*, October 1844, p. 141.

HOMICIDE BY AN UNQUALIFIED PRACTITIONER.

AN individual of the name of Bergeron administered a potion to a *demoiselle* Fauvelle, which caused her death. Not appearing when summoned before the court on a double charge of homicide by imprudence, and the illegal exercise of medicine, the said Bergeron thereby allowing judgment to go by default, was amerced in a penalty of 500 francs.—*Journal de Chimie Médicale*, Dec. 1844.

RECEIVED FOR REVIEW.

The Philosophy of the Moving Powers of the Blood. By G. Calvert Holland. M.D. Physician Extraordinary to the Sheffield General Infirmary, &c. &c. London: Churchill, 1844. 8vo. pp. 308.

The County Lunatic Asylum at Hanwell; its Size and Expense, and the Number of its Cures. 1845. 8vo. pp. 35.

Contributions to the Diagnosis and Pathology of Thoracic Diseases. By R. L. Mac Donnell, M.D. Dublin, 8vo. pp. 26. 1845.

Transactions of the Medical and Physical Society of Bombay, for the Year 1843. 8vo. pp. 250. Bombay.

Consumption, &c.: being a Letter in Refutation, &c. By D. Cronin, M.D. London, 12mo. pp. 72. 1844.

A Reply to the Malicious Personal Attack of the British and Foreign Medical Review. By E. O. Hocken, M.D. pp. 11.

The Veterinary Record and Transactions for January, 1845. 8vo. pp. 104. Longmans.

Dublin Journal of Medical Science, Jan. 1845. pp. 517. Hodges and Smith.

British and Foreign Medical Review, Jan. 1845. pp. 216. Churchill.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

List of Gentlemen admitted Members, Feb. 7.—E. L. Hussey.—R. D. Harling.—W. T. Iliff.—W. B. Young.—T. Murray.—M. Baines.—E. Candle.—J. Gilbert.—H. Wright.—F. W. Harris.—H. Hastings.—C. Millar.—G. Saunders.

APOTHECARIES' HALL.

Gentlemen who have obtained Certificates, Feb. 5.—Thomas Palmer, Cahir, Ireland.—George Downing.—Daniel Carter.—Peter Roscow, Haslingden, Lancashire.—William Henry Holman.

MORTALITY OF THE METROPOLIS.

Deaths from all causes registered in the week ending Saturday, Feb. 1.

ALL CAUSES	1011
SPECIFIED CAUSES	1004
I.—Zymotic (Epidemic, Endemic, and Contagious) Diseases, 200; among which, of—	
Small Pox	42
Measles	36
Scarlatina	35
Whooping Cough	26
Croup	9
Thrush	1
Diarrhoea	5
Dysentery	1
Cholera	1
Influenza	3
Typhus	32
II.—Dropsy, Cancer, and other Diseases of uncertain or variable Seat 110; among which, of—	
Inflammation	0
Dropsy	37
Scrofula	4
Cancer	17
Atrophy	12
Debility	20
Sudden Deaths	10
III.—Diseases of the Brain, Spinal Marrow, Nerves, and Senses, 155; among which, of—	
Hydrocephalus	30
Apoplexy	26
Paralysis	13
Convulsions	58
Insanity	2
Delirium Tremens	2
IV.—Diseases of the Lungs, and of the other Organs of Respiration, 303; among which, of	
Pneumonia	79
Hydrothorax	4
Asthma	35
Phthisis or Consumption	121
Diseases of the Lungs, &c.	22
V.—Diseases of Heart and Blood-vessels	29
VI.—Diseases of the Stomach, Liver, and other Organs of Digestion, 63; among which, of—	
Teething	13
Gastritis	0
Enteritis	17
Tubercles	9
Hernia	3
Disease of Stomach, &c.	4
Disease of Liver, &c.	5
VII.—Diseases of the Kidneys, &c.	6
VIII.—Childbirth, Diseases of the Uterus, &c. 10; among which, of—	
Childbirth	8
Disease of Uterus	1
IX.—Rheumatism, Diseases of the Bones, Joints, &c.	4
X.—Diseases of Skin, Cellular Tissue, &c.	0
XI.—Old Age	89
XII.—Violence, Privation, Cold, and Intemperance	35

ERRATUM.—In Mr. Carter's letter, page 611, line 20 from the bottom, *instead of* "against quackery," read "against the imposition of restraints on quackery."

WILSON & OGILVY, 57, Skinner Street, London.

THE
LONDON MEDICAL GAZETTE,

BEING A
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LECTURES
ON THE
NATURE AND TREATMENT OF
DEFORMITIES,

*Delivered at the Bloomsbury Square
Institution.*

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Contraction of the knee-joint in the straight or extended position—congenital—non-congenital. Case of congenital contraction of the thighs, knees, and feet. Causes of non-congenital contraction: injuries to the joint—position—chronic inflammation. Treatment: surgical and mechanical—division of the rectus femoris. Contraction of the hip-joint—congenital—non-congenital. Causes of non-congenital: cerebral or spinal irritation or disease—injuries to the spine—position—rheumatism—idiopathic inflammation. Treatment: mechanical—surgical and mechanical—section of rectus femoris, of tensor vaginae femoris, and adductor longus. Mode of performing the operation.

I HAVE now, gentlemen, to point out to you another contraction of the knee-joint, viz. contraction in the straight or extended position,—the patient suffering from what is called “stiff-knee.” This is a very rare condition of the joint, but is nevertheless both congenital and non-congenital. I have met with but one instance congenital, and that in an infant three months old, in whom the thighs were also contracted in the flexed position, and the feet both contracted, the one in the form of talipes varus, the other talipes valgus; the latter, however, differing from valgus, inasmuch as the anterior half of the foot, that is, from the astragalus, was abruptly everted, and fitted completely in the concavity formed by the foot affected with varus—vide fig. 1. The thighs being

FIG. 1.



An illustration of congenital contraction of the feet, knees, and hips, as described.

flexed upon the pelvis, the knees extended, and the feet thus contracted, were kept constantly lying on the abdomen, chest, and face of the little patient; and when the leg or legs were forcibly drawn down, they returned with an elastic impulse to their contracted position. It is the only case of the kind I have met with, but is confirmatory, in my opinion, of the cause I have so often stated to you of those congenital contractions which exist without cerebral disease, or without malformation of parts, namely,

position *in utero*. This child was born with the breech presentation, and had evidently, during its uterine existence, possessed very little, if any, power of moving the lower extremities out of the position in which they presented themselves, and which position would certainly adapt it to the smallest possible space it was capable of being placed in. There was no malformation, or any evidence of disease existing, or having existed, in the nervous system. The child was of the usual size, and perfectly healthy in every respect, so that I can assign no cause excepting the one mentioned. With regard to the non-congenital, you will generally find that it arises either from disease or injury to the joint. In the cases I have met with, chronic inflammation of the joint has been the original cause, producing in the first instance contraction in the flexed position, which, however, has been removed by the gradual extension kept up by means of a tin splint, before the contraction had become permanent; and when removed, the joints have been kept constantly in the extended position, and thus terminating in contraction of the extensors, which is most evident; so that it appears that muscles have not the power of retaining their proper functions if kept constantly at rest, but become rigidly fixed up to the point at which they have ceased to be elongated or drawn out, no matter what muscle or set of muscles may be so circumstanced, whether the extensors or flexors, &c. &c.; but although they might appear to be permanently shortened, yet I believe that no change in their structure takes place beyond the rigidity mentioned, and a want of development occasioned by their passive condition; and the cases mentioned in the early part of the course are conclusive testimony of this being the fact.

The cases that have presented themselves arising from injury to the joint have terminated in ankylosis, and of course have become irremediable. In one case, however, the adhesion was ruptured by force, and the leg flexed to about two-thirds of a right angle; afterwards slowly extended; but it occasioned great pain, and ultimately became fixed in its original position; so that I have not much to say on this cause. Patients thus afflicted are, as you must perceive, in a much better condition than those who suffer from either of the contractions before mentioned, but are nevertheless exposed to much inconvenience, and considerable lameness; as, in the act of progression, the leg affected is thrown or carried round, forming almost a semicircle on each step taken, the only means the patients possess of walking with any degree of comfort; for if they attempt to carry the leg straight before them, they are constantly liable to trip or fall from any

slight impediment that they may happen to meet with; and, of course, any very active employment can scarcely be followed.

Treatment.—The treatment, in these, as in the other contractions, will consist of mechanical solely, or surgical and mechanical, according to the rigidity met with, and the length of time the contraction has existed. In the congenital case just mentioned, after operating upon the feet and removing the contraction, I first, and for three months, attempted to flex the knees by mechanical means. The left knee yielded to that treatment; the right remained much in its original condition. I could flex it, and keep it flexed during the time the instrument was on, but upon removing it the leg was instantly extended, and remained so. I therefore determined to divide the rectus, which I did in the following manner: the leg was forcibly flexed, and held so by an assistant; the child lying on its back, I then introduced a small sharp-pointed knife on the inner margin of the rectus, about an inch and a half above the patella; and as soon as I imagined the point of the knife was parallel with the under surface of the muscle, I depressed the handle, and passed it beneath as far as its outer edge, then turned the sharp edge towards the muscle, and divided it transversely from below upwards. A pledget of lint was applied over the point of puncture, and secured with strapping and bandage; this was allowed to remain for a week, at the end of which time the puncture was healed, and the instrument reapplied (consisting of a simple spring, having attached at each extremity a circular band,—the one for the leg, the other for the thigh, and secured by means of a strap and buckle being applied beneath the joint); extension was again kept up, and in fourteen days the leg was flexed to a right angle with great ease; so that I should advise your adopting a similar course in a case of this description, as it is evident that the sooner the contraction is overcome the better. No ill effects followed the operation, nor apparent inconvenience; and the result has been most satisfactory.

In cases arising from disease in the joint, provided you can flex it without great force, I would advise your adopting the mechanical means alone, which you will do in the following manner. Let the leg be placed and secured in a splint, similar to that mentioned for contraction in the flexed position, with the metal plate in front of the thigh, as well as behind, and one also to cover the anterior surface of the leg. Then, with a male and female screw attached behind, gradually flex the leg—more or less rapidly, according to the feelings of the patient—and when it is flexed to or beyond a right angle, let it be extended again: as soon as this is

accomplished, direct the patient or friends to flex and extend it alternately once or twice daily, until free motion is obtained, when the screw should be removed, to allow of the patients exercising voluntary motion, as much as can be done twice or oftener daily, after which, let the screw be reattached and retain the joint during the night, and also during the intervals of exercise in the semi-flexed position, so that neither set of muscles shall regain a preponderance of power; for you must always bear in mind that there is a constant inclination or tendency to contract, if a preponderance of power exists. As soon as the patient can flex and extend the joint voluntarily, let the instrument be removed for a portion of the day, and let exercise be taken; in this way you will effectually remove the contraction; do not, however, omit the use of the instrument until all tendency to contraction is overcome, for rely upon it, should you do so, a return of the contraction will follow. A case occurred to me, some time since, of a gentleman, aged about 20, which had arisen from inflammation in the joint, followed by contraction in the flexed position; this was removed by the application of splints, and the patient was ordered to keep the leg constantly extended: this he had followed up for two years; at the end of which time he consulted me, when I found the rectus rigidly tense, and any attempt to flex the leg with the hand futile; I applied the splint mentioned, and kept up constant extension upon the muscle, and in three weeks succeeded in flexing the joint to a right angle; I then re-extended the joint, and proceeded in the manner described, until he could voluntarily flex and extend it very nearly to a right angle. He became, however, impatient, and left town, promising to persevere at home; I have since heard he has made but little progress, and in all probability the joint will return to its original condition. Of course, the moving of a joint which has been for a long time in one position is attended with some pain, and requires the greatest possible perseverance, both on the part of the medical attendant as well as on that of the patient, for unless the treatment is most unremittingly followed up, there is little prospect of a cure being effected.

In cases that have arisen from adhesions in the joint, when the joint is immoveable, and when upon forcibly attempting to flex it no pain is experienced, I would not advise your having recourse to any means of restoration, as the patient possesses a limb that is comparatively useful, although limited in its motions, whereas if you rupture the adhesions, the probability is you will not eventually improve the condition of the patient—at least, I have not seen any permanent good arise from such treatment; al-

though you may succeed in flexing the joint for a time, yet the chances are that it will return to its former state, as it can scarcely be expected that the secretory surface of the synovial membrane, or that the ruptured extremities, will assume a condition compatible with free motion. With this, gentlemen, I conclude the contractions of the knee joint, and shall now proceed to one scarcely less difficult or less important, namely—

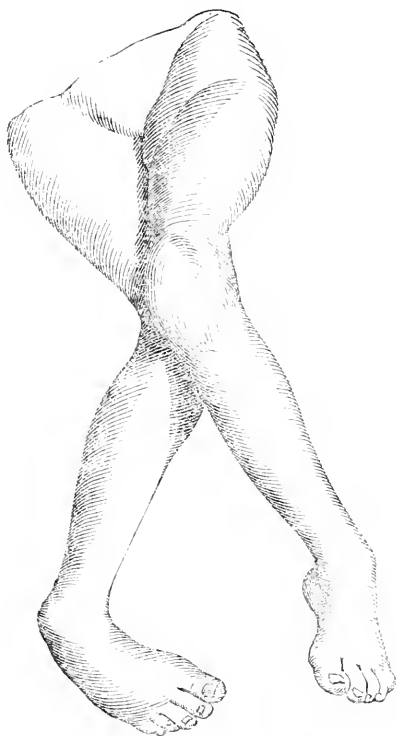
Contraction of the hip-joint.—Contraction of the hip-joint is both congenital and non-congenital, and will be found either to consist of contraction in the flexed position simply, or, as is most frequently met with, flexed and adducted combined.

The only case that I could distinctly trace as being congenital was that I have just now related (vide fig. 1), although some cases were stated to have been congenital, in which the general spasmodic condition also co-existed; in that case, however, the contraction was confined to the flexors almost entirely. The thighs, it is true, were held in contact, but could be easily separated, and would at times remain so; but from the little patient possessing no control over the extensors, no opportunity was presented for its abducting the thighs; since the contraction of the knees and feet has been removed, the thighs are moved in either position by the voluntary effort. I have not met with a congenital case in the adult or youth, so that, if it has occurred, in all probability the weight of the extremities, and the constant extension the thighs would naturally be subjected to, have overcome the contraction.

The non-congenital arise from cerebral or spinal irritation, injury to the spine, position, from strumous disease in the hip-joint, or its neighbourhood.

In the cases arising from cerebral or spinal irritation, you will find either paralysis of one or more muscles, especially of those below the knee, and which are generally the extensors of the legs, and flexors of the feet, for you will perhaps never meet with the contraction from this cause, without contraction of the knees and feet also of one or other of the forms I have mentioned to you, or else a general spasmodic condition of the muscles, affecting the lower extremities solely, or, as is most generally the case, a spasmodic condition of all the voluntary muscles, and I may add also, a contraction of the adductors combined; as an invariable consequence, the one leg being thrown and retained constantly over its fellow. A case now in the Charity illustrated this most fully, for, when admitted, both thighs were retained, as many of you must have seen, in their extreme amount of adduction, which, with the contraction in the knees and feet, gave the boy more the appearance of some hideous malformation. In these spasmodic cases, then, you have, in ad-

FIG. 2.



Example of contraction of the thighs in the adducted and flexed position, combined with contraction of the knees and feet. The feet, however, in this instance, were both contracted in the form of talipes varus. In the case from which this cut was taken, all the voluntary muscles were spasmodically affected.

dition, contraction of the knees in the flexed position, combined with talipes varus of one foot, talipes valgus of the other, (vide Fig. 2) ; the lower extremities being perfectly useless, but without any disease or disorganisation of the joints themselves, as also, in the congenital contraction.

In cases arising from injury to the spine, paralysis is the immediate result, and upon recovery from which the knees and feet will be found very generally to have become contracted: when, from the constantly flexed position, the thighs are kept in, to enable the patient to swing himself between two crutches, contraction of the flexors takes place, so that after the deformity has been removed in the knees or feet, the thighs will be found contracted, and of course present a great obstacle to the patient walking with any degree of comfort. I attended a gentleman eighteen months since, for contraction of the knee-joint in the flexed position, which had existed since his infancy; after re-

storing the leg to the straight position, I found, on his attempting to use it, that the flexors of the thigh had become contracted, solely from that limb having been kept flexed, to enable him the more conveniently to move about with the assistance of a crutch.

In rheumatic inflammation affecting the joint, unless the means employed give speedy relief and cut short the attack, a change in the secretory surface of the synovial membrane quickly takes place; adhesions are formed, and perfect ankylosis results; so that, as in the knee, unless the patient presents himself within a short time from the termination of the acute attack, you will in all probability be unable to adopt any means which shall produce a beneficial result.

Idiopathic inflammation of the hip-joint assumes a more rapid, violent, and destructive character, than in any other joint; for, in a few hours, a patient attacked with it suffers from disorganisation, to a greater or less extent, of the cartilage of the acetabulum or head of the femur, producing, if not contraction, a grating sensation from disorganisation, which frequently terminates in the hardened ivory condition of that portion of the cartilage which has thus suffered, and if the patient is confined long with the attack, contraction of the flexors and adductors results; for in this instance, as well as in all others, the position instinctively maintained during the attack will be that which occasions the smallest amount of pressure in the articular cavity, and it must be evident that no one could effect this so completely as the adducted and flexed, as the body of muscles acting on the thigh-bone are by this means kept in a relaxed state, and the extensors of the thighs, powerful as they are, become and continue relaxed and passive by the same instinctive efforts which occasion contraction of the flexors and adductors; for if they act at all, they can only do so by first fixing the head of the femur on the acetabulum, which must irritate and increase the inflammatory condition of the joint, and of course add to the pain from which he is already suffering.

The last cause I shall have to mention is strumous disease in the joint, or the neighbourhood of the joint; most frequently in the joint itself. This cause is as serious, if not more so, than either of those mentioned, as it but too frequently terminates in the destruction of the articular cavity, and ligaments connected with it, oftentimes also of a considerable portion of the bones surrounding the joint, as well as of the head of the femur itself, producing a change in the relative position of the bones, and upon the subsidence of the diseased action, contraction of the flexors and adductors will be found, together with more or less shortening of the

entire limb from the loss of substance, and from the displacement of the head of the bone, which as a rule will be found on the dorsum of the ilium, and from the length of time occupied by the restorative process in this affection, under the most favourable circumstances, the contraction becomes proportionally rigid, and will require the greatest care and attention in the treatment. In cases arising from either of the causes mentioned, the nates will be flattened, from the atrophied condition of the muscles which have remained passive; and in each, with the exception of the last, the trochanter major will be found in its proper relative position, admitting of free motion in every direction, as far as the contracted muscles will admit of, provided the integrity of the joint is not disturbed. In the last case, however, you will not only find the nates flattened, but the trochanter major, from the displacement which has happened, project, and of itself present a deformed appearance.

Patients suffering from this contraction are rarely able to use the extremity without the assistance of crutches, and if the contraction exists to a right angle, the leg becomes almost useless; if, however, the contraction does not exist to so great an extent, they can get about by placing the toes on the ground, and by the yielding of the lumbar vertebrae, or by wearing a high-heeled shoe; in either case great lameness and inconvenience is the result, and very frequently contraction of the knee, or of the heel, is a consequence. In those cases of contraction which have arisen without disease in the joint, the only method of walking is either by the head and chest being thrown forward, or by the yielding of the lumbar vertebrae producing lordosis, the nates projecting, so that under any circumstances they are subjected to greater inconveniences than by most of those contractions previously mentioned.

Treatment.—The treatment consists of mechanical, or surgical and mechanical, and, in incipient cases of disease in the joint, local and general means also.

In incipient cases arising from disease in the joint, it has been recommended that two or three years should be allowed to elapse before any attempts are made to remove the contraction. This, from my experience, is unwise and unnecessary, if it is not directly injurious to the patient, which I believe it to be. The plan I have adopted, after the active symptoms of the disease have subsided, is to keep up a constant steady extension, to such an extent only as will not admit of the patient suffering from pain, which can be done at the same time the general health is being attended to, and any local irritant applied, should it be thought necessary: in this way not only is the contraction prevented from becoming confirmed, but the restorative

process is assisted by the limb and joint being kept at rest or nearly so, for it is evident, one of the most certain means of adding to the diseased action already in existence, is by allowing motion of any kind to take place, excepting that only which is of the most passive nature. In these cases, then, I would advise your having recourse to an instrument I have had made, similar to that represented in Fig. 4, which, by its fixing the pelvis, and being also attached by the broad webbing strap to the chest and abdomen, will enable you to keep up any amount of extension on the thigh, first bandaging the foot, leg, thigh, and hip, with a flannel roller; for, as I mentioned to you when speaking of scrofulous disease of the knee-joint, unless the natural temperature is kept up, the restorative process cannot go on.

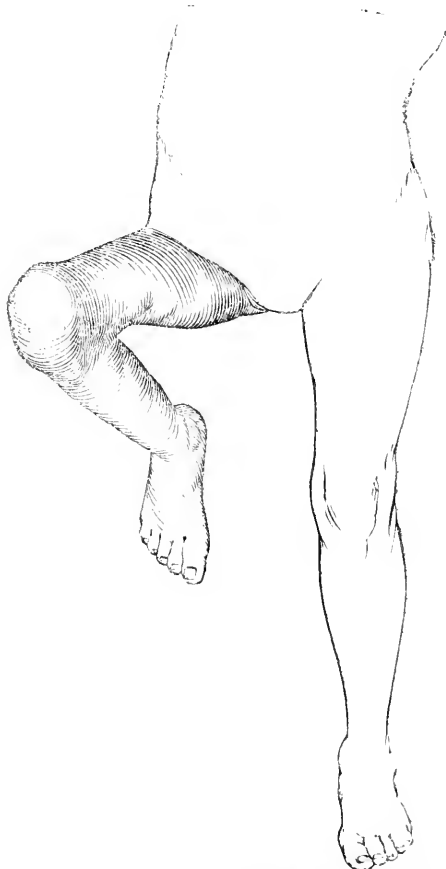
In cases occurring in the poorer classes, whose means do not allow of their procuring an instrument, I have had recourse to a straight board, corresponding with the size of the back, with an extended portion to correspond with the thigh contracted, webbing straps being nailed on each side of the board, so that the abdomen, chest, and pelvis, may be secured tolerably well: of course a pad must be used, to prevent any undue pressure being made. With this I have succeeded in bringing down the thigh and preventing a contraction from taking place. You cannot, of course, restore any amount of motion, and your attention must, therefore, be directed to bring the thigh straight with the pelvis, which enables a patient to use the leg with comparative ease, and without the use of crutches. In young subjects, provided the disease has subsided, and a short time only has elapsed, the contraction may, as a rule, be removed without an operation, but if in the course of extension any of the superficial muscles are found to be rigidly tense, a division of them had better be effected. In the older subjects, and when the disease has ceased to exist for any length of time, although the new matter may not have become consolidated, you will find the contraction rigid, and scarcely, if any, perceptible motion can be discovered; you must then be guided by the rigidity of the muscles themselves, as well as by the patient complaining of pain, upon forcible extension being kept up, for so long as there is no ossific union you may on all occasions relieve, if not remove, the contraction. A case of this kind was some time since admitted into the Charity, in which the thigh was contracted to a right angle with the pelvis, and the boy could not use the limb in the least (vide Fig. 3). No motion, or trace of it, could be discovered by the use of great force. It was proposed to saw through the neck of the thigh-bone (Dr. Barlow's operation, of Philadelphia), and the father

of the boy assented to its being done. I examined him, however, carefully and repeatedly, and adopting the course I have recommended to you, namely, the keeping up of forcible extension for some time when a doubt exists of ankylosis having taken place, I found the rectus, tensor, vaginae femoris, and adductors, continue rigidly tense, which they would not have been had the ankylosis been perfect, for in that case they are perfectly relaxed; I therefore proposed that the division of as many as possible of the contracted muscles should be first tried, as in the event of that not succeeding the patient would be in no worse condition than he was before: accordingly, this was done. The rectus, adductor longus, and tensor vaginae femoris, were divided, and after the punctures had healed, extension was kept up by the instrument represented in fig. 4,

when I had the satisfaction of finding the thigh yield about half; and although I failed in bringing it into the straight position with the pelvis, yet it was so far reduced that the boy could get about comfortably with a stick, whereas previously his only means of locomotion was with crutches. So that in these apparently hopeless cases great good can be effected.

The mode of performing the operation is as follows:—Let the patient lie on his back, and first feel for the front edge of the tensor vaginae femoris, then introduce a long sharp-pointed knife to its inner side, and as soon as you have carried the knife as far as the breadth of the muscle, turn the sharp edge towards it, and divide it from within outwards; you then proceed to the division of the rectus in the following manner: introduce a sharp-pointed knife on its inner

FIG. 3.



An illustration of contraction of the hip-joint at right angles, taken from a patient about 16 years of age. The contraction had arisen from disease in the joint, which had also resulted in displacement.

FIG. 4.

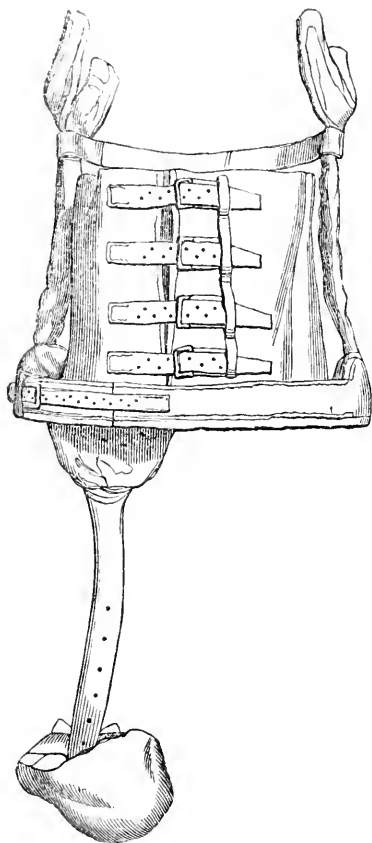


Diagram of the instrument alluded to for the reduction of contraction of the hip-joint.

margin, at about an inch and a half from the pelvis, pass it perpendicularly downwards, and when the point is parallel with the under surface, depress the handle, and carry the knife horizontally beneath it from within outwards, and divide it transversely from below upwards. The division of the adductor longus will require great care, as although it is rendered prominent by the contracted state, yet it is in close proximity to the femoral vessels, and unless the greatest precautions are taken, risk is incurred of puncturing them. The mode I usually adopt is as follows: direct an assistant forcibly to abduct the thigh, so that the tension may be increased; then with a small scalpel puncture the fascia as nearly as possible to the *outer* edge of the muscle, carrying the knife directly downwards upon it; then introduce a blunt-pointed knife, pass it beneath, and

as nearly as possible horizontally across from without inwards, *i. e.* towards the skin on the inner side of the thigh, turn the sharp edge towards the muscle, and divide it. By this mode you run no risk of puncturing an artery; the complete division of a small branch would be of no moment, as a compress and bandage will effectually control it: you cannot, however, exercise too great caution. After the division, place pledgets of lint over the points of puncture sufficiently large to prevent any venous bleeding, and secure them with strapping and bandage, which you should allow to remain for a week. Afterwards, apply the instrument mentioned, and proceed with the extension as rapidly as the feelings of the patient will admit of. Occasionally you will find only one of the muscles mentioned tense, which of course simplifies the operation. In those cases of contraction which arise from cerebral or spinal irritation or disease, and in which the knees and feet are also contracted, I would advise your operating first on the knees and feet, and when their normal position is restored proceed with the thighs. In some, however, you will be compelled, from the great amount of contraction of the muscles of the thighs, to abduct them before you can conveniently follow up the after-treatment of the knees or feet. In the case I mentioned to you, now in the wards, it would have been impossible to have treated the knees or feet without first abducting the thigh, which was therefore the first step in the treatment, and the boy now has his limbs restored to their natural position: you will therefore be guided according to circumstances. In the slighter cases of contraction, which exist without disease in the articulation itself, you may proceed in the manner described in my last lecture, without operation.

After the leg is brought into the straight position, in cases in which actual shortening of the entire limb exists, let the patient have a boot with a raised sole, made to correspond with the fellow limb, and raised equally from the heel to the toe, when, possessing the free use of the ankle and knee joints, they will be enabled to get about with comfort. In the spasmodic cases, supports from the hips downwards are absolutely necessary to prevent a return to the malposition, and also to enable the patient to take exercise. You will be surprised to see how much better the milder spasmodic cases can walk than could reasonably have been anticipated, although the spasmodic condition of the muscles still exists. A patient lately in the Charity, about 14 years of age, in whom I divided the adductor longus in each thigh, the flexors of both knees, and the tendo-Achilles in each foot, is now walking with comparative ease, and has much improved

since he left the Charity. So that although these are perhaps as little encouraging as any case of deformity you may meet with, yet your efforts must still be directed to do as much as the case admits of, which, to the patients themselves, is not thought insignificant, from the comparative comfort with which they are enabled to move about.

ON
PERICARDITIS, A COMPLICATION
AND SEQUELA OF SCARLATINA :

WITH CASES AND OBSERVATIONS.

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(For the Medical Gazette.)

Pericarditis a complication and sequela of scarlatina.—Mortality from scarlatina.—Complications of scarlatina.—Cases of pericarditis.—Period of accession of pericarditis.—Character of scarlatina complicated with pericarditis.—Connection with affection of the kidneys and arthritic pains.—Treatment.

THE most cursory glance at the abstracts of the causes of death in this country prepared by the Registrar-General, suffices to indicate the great importance of scarlatina as a cause of mortality in this country. In the year 1840, the mortality in England and Wales by this one cause alone was no less than 19,816, and in the metropolis 1,954. The mortality from this cause is perhaps rendered still more striking when contrasted with the mortality of two very important diseases, viz. small-pox and typhus. In the same year, viz. 1840, the number of deaths in England and Wales from small-pox was 10,434, being little more than half the number of deaths from scarlatina. Again, in the same year, the deaths from typhus in England and Wales were 17,177; considerably less than the deaths from scarlatina.

The importance of scarlatina as a cause of death is further shewn by the great mortality which this disease has created during the thirteen weeks ending the 28th of December, 1844: the deaths from scarlatina were no less than 872; while the number of deaths from small-pox and measles, although both were epidemic, amounted respectively to 571 and 385.

The abatement of the mortality by scarlatina is an object of the utmost importance, and is well deserving of the best endeavours of the physician. That this is attainable to at least a certain extent there can be no doubt. The remarkable abatement of mortality by the two diseases which have been

referred to, which has taken place in our own time, is pregnant with hope for a similar result in the case of scarlatina. It is true that in respect to the latter disease we have not yet discovered a preventive such as vaccination, and that hitherto no external arrangements have been found to arrest its career, as draining, ventilation, and sewerage, have checked the ravages of continued fever.

The reduction of the mortality by scarlatina to any very great extent, should that ever occur, there is reason to believe will be owing to the discovery of some such process as inoculation of the virus of a mild form of the disease, or of a milder analogous disease, to some improvement in external arrangements, or to an internal revolution in the human economy.

But that the mortality of scarlatina may be reduced in a moderate and even a considerable degree without a process analogous to vaccination, without the discovery of external arrangements protective against the disease, or by a revolution in the human economy, rendering it incapable of undergoing the disease, or less prone to it, there can be no doubt. Improved medicine is capable of effecting this, and until other means are discovered, it must suffice to use this engine, and to attain this end.

Medicine will be improved, and this end attained, according as our knowledge of disease is accurate and complete, and every contribution to the history of disease must consequently be operative to the end of abating mortality.

Notwithstanding that the history of scarlatina has of late years been made more accurate and satisfactory under the able hands of Tweedie, Burrows, Wood, Willis, and others, there is reason to believe that much is still wanting to complete the portrait. The condition of certain organs during the disease is not well known, the complications which are wont to arise are, there is reason to conjecture, not all fully made out, and the nature and importance, and relations of some pathological changes, particularly of the kidney and the skin, which are wont to arise, it is all but certain, have yet to receive much important elucidation.

A more extended knowledge of the complications and sequela of scarlatina will prove highly salutary, both by leading to an increase of precaution with a view to their prevention, and to an improvement in the treatment. It is with this impression that we have ventured to request the attention of the profession to a few facts connected with this disease which have lately fallen under our notice. It is confidently anticipated that these facts will form an useful contribution to the pathology of the disease, and lead to increased watchfulness on the part of

medical practitioners when treating scarlatina.

It has been long familiarly known that scarlatina is liable to be complicated with inflammation of the brain, of its investing membranes, of the cervical glands, and with coma. But it does not appear that pericarditis has been commonly taught as a complication of this disease.

The occurrence of three cases of pericarditis as a complication of scarlatina, in our practice within the last few months, has convinced us that inflammation of the pericardium not unfrequently complicates scarlatina, and has induced us to refer to the various esteemed writers on scarlatina, for the purpose of discovering what notice this complication has received.

A few writers on scarlatina allude to pericarditis as a complication. Dr. George Burrows alludes briefly to this event, in the article *Scarlatina*, in the Library of Medicine. Dr. Robert Willis, in an able article on *Anasarca* after *Scarlatina*, in the 10th No. of the London and Edinburgh Journal of Medical Science, remarks, that in examining the bodies of those who had died of scarlet-fever, he has sometimes found inflammation of the pericardium, and occasionally traces of endocarditis.

Some writers, also, on carditis, have remarked that this disease occasionally arises as a complication of scarlatina. Dr. Joy, in the article *Carditis*, in the Library of Medicine, says: "Pericarditis frequently makes its appearance in connection with the eruptive fevers, and more especially with scarlatina:" and Dr. Copland, under the head *Pericarditis*, in the Dictionary of Medicine, remarks, that "internal carditis appears at an advanced stage of, or during convalescence from, either of the eruptive fevers." Rilliet and Barthez, at page 211 of their joint work entitled *Traité des Maladies des Enfants*, writing on diseases productive of pericarditis, have this passage:—"Il en est deux, toute-fois la scarlatine et le rhumatisme, qui nous semblent, quoique dans des circonstances bien différentes, prédisposer plus que les autres à cette complication; le rhumatisme par analogie de nature, la scarlatine par la facilité avec laquelle elle se complique de l'inflammation des membranes sereuses."

Puchelt, who published at Leipsic, in 1824, a short dissertation entitled, "*De Carditide Infantum Commentarius*," mentions scarlatina, along with many other diseases, as a cause of carditis. He does not say that any of the cases of carditis which fell under his own observation were preceded by scarlatina. Referring to Krukenbergius, he says, "*Passim carditidis cum morbillis et scarlatina conjunctæ, sed obiter, men-*

tionem facit, aliquot ab ipso relatæ historiæ ejusdem suspicionem in nobis movent."

On the other hand, several very able writers and much esteemed authorities both on carditis and scarlatina, make no allusion whatever in their writings to pericarditis as a complication of scarlatina. Burserius, in his *Institutes of Medicine*, is silent on the subject of pericarditis, although he says that in the bodies of several persons who died of scarlet-fever at Florence in 1717, the lungs, pleura, intercostal muscles, diaphragm, kidneys, and intestines, were found more or less inflamed. Dr. Wells, who was amongst the first English physicians who wrote upon anasarca as a sequela of scarlet-fever, makes no mention of pericarditis in his paper published in 1806. Dr. William Wood, of Edinburgh, in his detailed and careful account of the epidemic scarlet-fever of 1835-6, published in the 47th vol. of the Edinburgh Medical and Surgical Journal, is equally silent on this subject. But in this instance, as in others, the silence may have arisen from the disease having been overlooked rather than from its non-occurrence. This is rendered the more probable from a passage in his paper—"but in all the cases in which symptoms indicating an affection of the head and chest were connected with the oedematous state, there was more or less general febrile excitement, and the pulse was occasionally remarkably frequent, with the heart beating tumultuously."

Dr. George Hamilton, of Falkirk, who published a careful account of an epidemic of scarlet-fever, in the 47th vol. of the Edinburgh Medical and Surgical Journal, does not once allude to the subject. Dr. Hepe, in his paper on *Pericarditis*, in the *Cyclopædia of Practical Medicine*, and in his *Treatise on the Diseases of the Heart and Great Vessels*, makes no mention of scarlatina as a cause of the disease. Dr. Tweedie, in his valuable contribution on scarlatina in the same work, does not allude to pericarditis as a complication of this exanthesis. Dr. Watson, in his very practical *Lectures on the Practice of Physic*, does not place pericarditis amongst the complications of scarlatina, but, on the contrary, mentions that the affections of the joints simulative of rheumatism, occurring in the course of scarlatina, may be distinguished from true rheumatism by the absence of implication of the heart. He adds, that in no instance of tumid joints occurring in the course of scarlatina did the heart become affected. Further, there is reason to believe that the profession at large is not sufficiently aware that pericarditis is liable to complicate scarlatina. In conversation with many well-informed members of the profession, both physicians and general practitioners, we have

found that a large proportion of them were not at all cognizant of this complication of scarlatina.

It will, perhaps, appear to the profession, that although pericarditis, as a complication of scarlatina, cannot be regarded as a novelty, that the subject is nevertheless worthy of being submitted to its attention, on account of the omission of the subject altogether by many esteemed writers, of what Dr. Watson says of its non-occurrence in cases of tumid joints, a statement scarcely corresponding with our experience, and on account of its being comparatively unknown to many members of the profession.

The profession will agree with us, we doubt not, in the opinion, that every one of its members should be fully informed on this point, both on account of the great importance and danger of the complication, and from the fact that it is in pericarditis, perhaps, as much as in any other disease, the benefit of prompt treatment is most happily displayed, and in which the evil of oversight on the part of the practitioner is most strikingly and perniciously exhibited. For a happy issue of this complication it is peculiarly necessary that the practitioner's efforts be made "*dicto citius*."

The writer is further encouraged to lay this paper before the profession, from the assurance he has that few discoveries in the history of disease have contributed more to the safety of the afflicted than the almost recent discovery of the very common connection between acute rheumatism and pericarditis.

CASE I.—J. S., æt. 4 years, a fine healthy boy, became affected with scarlatina about the beginning of last June. The disease was smart, attended with considerable pyrexia. The throat was much inflamed and swollen; the eruption was general and vivid, and the cuticle desquamated freely. The child was recovering his health, and was going out a little into the open air, when, about three weeks from the accession of the exanthem, the scrotum was observed to be swollen. From this time the surface of the body began to swell, and the patient became much enlarged from effusion in the cellular tissue. The child was taken to one of the hospitals, where he became an out-patient. Under the treatment pursued, the anasarca greatly diminished, but the child's general health, notwithstanding, became deteriorated.

On the 27th of August, I accidentally saw the patient, when I was requested to prescribe for him. There was then very little effusion in the cellular structure under the integuments, the left testis was enlarged, and fluctuated, effusion within the right pleural cavity was indicated by dulness on

percussion, absence of respiration, and by decided increase in the volume of the right side. The action of the heart was very rapid, violent, and tumultuous. There was great dyspnoea; the patient preferred the erect position; he moved incessantly, so as to oppose great difficulty to an accurate examination with the stethoscope. The pulse was 140 per minute, small and irritable; respiration was 60 per minute; urine non-albuminous; the countenance indicated the greatest anxiety; the features were sharp; the countenance pallid, and the eyes active and bright. The patient was very weak, and evidently dying. Spirits of nitrous ether and cordials were ordered. He rapidly became worse till the 1st September. He was then seized with great restlessness. He called out in the most urgent manner, and frequently attempted to vomit. He died in the course of the afternoon.

Autopsy.—13 hours after death, the body was inspected. *Thorax.*—The pericardium was intimately attached to the pleura-costalis, and contained about six ounces of thick sero-purulent fluid, which rushed out as soon as the scalpel reached the cavity. The pericardium was much thickened, both where it formed the containing sac, and where it invested the heart. The free surface of that part which formed the bag was covered with shreds and patches of lymph, of a faint yellow colour, while the membrane itself was of a rosy hue. That part of the pericardium which invested the heart and the commencement of the great vessels was covered with a dense rough coating of coagulated lymph. A few loose bands of false membrane connected the free surface of the pericardium and that part of the membrane which invested the anterior part of the heart. We add the other morbid signs.

The pleura pulmonalis of the left side was connected with the pleura costalis by means of a few thin adhesions. The cavity of the right pleura was occupied by sero-purulent fluid of a green colour, inoffensive. The right lung was solidified, shrunk, and retracted, lying alongside the vertebral column. The air cells were totally obliterated; a few of the minute bronchial tubes were solidified.

The abdomen.—The peritoneal cavity contained about four ounces of green sero-purulent fluid of less consistence than that found in the thorax. Several adhesions were found between the anterior part of the liver and the corresponding part of the peritoneal covering of the walls of the abdomen. Various pieces of smooth lymph were seen lying upon the liver; one piece of this substance, in the form of a band, accompanied the round ligament. The liver was large, and contained much blood, and the gall bladder was distended. The stomach and smaller

intestines were large, the caput cæcum coli, and the whole extent of the colon, were much reduced in size. The colon, in no part, exceeded the little finger in size, and it was much corrugated. The spleen was healthy. The kidneys were large and firm, $3\frac{1}{2}$ inches in length. The surface was mottled from the presence of minute vessels on the cortical substance, which was somewhat pale; a condition noticed by Dr. Willis in some cases of anasarca after scarlatina. The cortical substance throughout, although pallid, contained many small vessels, and a few very minute granules. The left kidney weighed two ounces and thirty grains; the right, two ounces and ninety grains.

The cavity of the left tunica vaginalis was obliterated, except for a small space in front of the testis. It had been the seat of inflammatory action, and adhesion had taken place. The small remaining cavity was filled with two drachms of sero-purulent fluid of a green colour and of a very thick consistence. The testis was healthy.

CASE II.—16th Nov. 1844.—Frederick Cook, aged 6 years, a well-grown stout boy, enjoying on the whole good health, is reported to have suffered an attack in the left hypochondriac region of an inflammatory character some years ago, from which he made a perfect recovery. He was in perfect health till seven days ago, when he was found to be ailing. The illness proved to be scarlatina; the eruption came out on the second day, was vivid and general throughout the body, and disappeared on the fifth day. During the night of the sixth day he was suddenly seized with violent pain in the præcordial region; he became exceedingly restless, agitated, and he endeavoured to lie with his shoulders raised, and inclining to the right side. The mother remarked violent palpitations of the heart, and becoming apprehensive, requested the writer to see her child. He was seen within twelve hours of the seizure. He complained of severe pain in the region of the heart, increased by pressure in the epigastric region, and by coughing. The soft parts at the præcordial region are lifted to an unusually great extent by the apex of the heart. The impulse of the heart is much stronger than natural, and is felt over the whole anterior surface of the left side of thorax, from the second rib downwards. The hand is lifted by the impulse, as is likewise the stethoscope to such an extent as to cause considerable rubbing on the ear, which might be mistaken for rubbing sound proceeding from the heart. The most cautious examination discovers neither rubbing nor bellows sound. The patient is troubled with a frequent short cough. The pulse is regular, full, and 120 per minute. The expression of face is anxious, and the

eye indicates alarm. Bowels open. Urine rather scanty, high in colour, and deposits sediment of lithate of ammonia.

Venæsectio ad uncias duas. Mistura Vini Antimonii Potasso-Tartratis, et Nitratis Potassæ, sæpe sumenda. Capiat grana duo Calomelanos quaque tertia hora. Applicentur hirudines tres præcordiis.

17th.—The blood was slightly cupped, had no buffy coat; the serum was straw-coloured, specific gravity 1025. The patient has been much better, he has passed a good night, and the pain is much abated; throbbing at præcordia is considerably reduced, but the heart's action is still unusually great; pulse 120 and full; cough is less frequent, face is less anxious; leeches bled well; stools frequent, of green colour; urine paler, reddens litmus; heat gives no precipitate.

Repetantur Pulveres et Mistura, et applicentur hirudines tres præcordiis.

18th.—Patient is easier, less pain in region of heart, palpitation further reduced, pulse 112, complains of pain in the nape of neck and in right wrist, aggravated by motion. He cries with the pain of wrist, when he exerts that part, as in endeavouring to sit up in bed. Several green stools; urine pale, deposits lithate of ammonia, reddens litmus; specific gravity 1020; neither heat nor nitric acid gives precipitate of albumen.

Repetantur Mistura et Pulveres Calomelanos. Capiat Unguenti Hydrargyri Fortioris, grana quinque, bis in die. Applicetur Unguentum Hydrargyri Fortioris præcordiis.

19th.—No pain in region of heart; palpitations further reduced; pulse 100.

Repetantur Mist. Pulveres, et Unguentum Hydrargyri et interne et externe. Applicetur Empl. Lyttæ præcordiis.

20th.—Pulse 100; no pain in region of heart; countenance placid; appetite returning.

Repetantur Medicamenta.

22d.—Is sitting up in bed; scarcely any pain in nape of neck or wrist; complains of teeth being very painful, but the gums are not swollen. No rubbing or bellows sound to be heard.

Sumat. Misturam Rhei et Magnesiae, cum opus sit pro alvo laxanda.

After the lapse of ten days, during which the patient had been sitting up out of bed, he became the subject of anasarca with albuminaria, in the course of which several circumstances of interest were noted, but which need not be mentioned here. It will suffice to say, that under the use of gentian and spirits of nitrous æther, together with

the warm-bath and wine, the swelling rapidly disappeared, and the urine became perfectly healthy. At the present time (18th Dec.), the patient is strong, runs about the house, and is rapidly regaining his florid colour. The heart's action is still, however, abnormally increased to a slight extent.

I deem it of importance to mention that the patient was visited at my request by my friend Mr. Dalton, of the Northern Dispensary, a few days after the onset of pericarditis, and that he was fully satisfied of the heart having been the seat of active inflammation within the few preceding days. There is one point of interest in this case which may be here mentioned with advantage; the patient frequently felt faint during the course of the anasarca, and the pulse of the right wrist would frequently become imperceptible, that at the left continuing perceptible, but very weak. The other remarkable features in this case shall be laid before the profession ere long, together with the histories of several other interesting cases of anasarca following scarlatina, which it is believed will throw some new and valuable light on the pathology of the disease, and lead to a more discriminating treatment of this sequela of scarlatina.

With a view to remove all reasonable doubt on the minds of any one respecting the morbid condition of the heart, it was determined to submit the patient to an eminent stethoscopist. Dr. Taylor, of Keppel Street, was good enough to examine him, and the following is his report. The examination took place on the 30th December. "Pulse at right wrist smaller and weaker than at left; impulse of heart too strong, heaving, and felt over a considerably larger space than natural; sounds of heart healthy, with perhaps a trace of murmur below nipple; dulness over heart extends to upper border of fourth rib, and extends transversely two inches; apex of heart beats between fifth and sixth ribs. There is moderate hypertrophy. Respiratory sounds healthy.

CASE III.—27th Dec. 1844.—John Jones, æt. 9, well grown, of previous good health, in comfortable circumstances, was seized with scarlatina nine weeks ago. The eruption was general, and remained out two or three days; the throat was affected to a slight extent only. The patient complained of pain in chest, and "thumping and knocking" of the heart during the period of the eruption. At the same time he suffered severe pains all over the body, but particularly in the ankles, which appeared to the mother slightly swollen. The urine was scanty, and caused pain when voided. The medical attendant said that the boy was suffering from pleurisy, and applied leeches to the chest. The patient improved, but in the course of a few

days he was again seized with what was called a pleuritic attack, when he was again treated by leeching. From this he made an incomplete recovery, and has been ailing more or less ever since; the "thumping" of heart still continuing, with occasional pain. Such is the report of the mother and of the patient.

At present, the face is decidedly of a livid hue; the expression is anxious and timid; the pulse is feeble, 100 per minute, weaker and smaller at right wrist than at left. The impulse of heart is increased both in force and in extent; it lifts the hand and the stethoscope: there is no bellows sound, nor can any rubbing be heard. The patient starts much during sleep; tongue clean; bowels open; appetite good. The external jugular veins are unduly distended, and the patient lies on his right side. Urine is plentiful, of a light amber colour; specific gravity 1025; heat and nitric acid give no precipitate; reddens litmus paper. Slight counter-irritation was applied, and a mixture of Tincture of Hyoscyamus and Sesqui-carbonate of Soda was ordered; a few doses of Hydrargyrum c. Creta were also prescribed. He improved considerably under this treatment, and the impulse of heart abated considerably. On the 30th December, at our request, Dr. Taylor examined the patient. No doubt of the heart being diseased, certainly not to a great extent, was entertained, yet it was deemed advisable to request the opinion of another physician. The following is his report:—"Face and lips somewhat livid; impulse of heart perhaps slightly increased in force and in extent; sounds of heart healthy; less vesicular respiration in left than in right lung inferiorly; percussion duller on left side; both sides measure alike from spine to sternum; vocal resonance much the same on both sides; pulse at right wrist is weaker than at left wrist.

12th Jan.—The patient has for the last few days taken a mixture of iodide of iron. He is now stronger, and experiences no pain in the region of the heart. On placing him before the window, the left mammary region is seen to be more prominent than the right, and the action of the heart is seen to move the soft parts more than natural. A line drawn from the middle of the sternum to the left nipple is a quarter of an inch longer than a line drawn from the same point to the right nipple.

From the occurrence of two unequivocal cases of pericarditis, and of a third of perhaps a doubtful character, in the practice of one physician, in the course of a few months, it appears reasonable to conclude that this complication is by no means rare.

The comparative infrequency of its detection is not conclusive evidence against the foregoing supposition. Many circumstances conspire to render it possible that the com-

plication may have been overlooked. Scarlatina is a disease of children, and it must be admitted, that their maladies, at least in this country, have not received that large measure of attention which has been accorded to the diseases of adults. Children are rarely admitted into the great hospitals of this country, where disease is, in a pre-eminent manner, most amply investigated, by the highest order of physicians. It is consistent with fact, to say, that the vast majority of scarlatina cases fall into the hands of gentlemen in general practice, whose extensive engagements preclude for the most part their paying very great attention to the less striking features of disease, and almost preclude the possibility of making post-mortem examinations. Further, the detection of pericarditis is attended with considerable difficulty. Rilliet and Barthez point this out in the following passage. "*Les symptômes de la péricardite ne sont pas faciles à constater chez les enfants. Le peu d'abondance des produits pleurétiques, la coïncidence d'autres affections graves, qui détournent l'attention de l'observateur, ou masquent les principaux phénomènes, l'absence de la douleur, ou la difficulté que l'on éprouve à la constater, l'agitation, l'anxiété des petits malades, qui empêchent quelquefois l'application de l'oreille à la partie antérieure du thorax, sont autant de causes qui s'opposent à ce que l'on puisse reconnaître facilement la pleurésie.*"—p. 205.

It is by no means improbable that not a few cases of organic alteration of heart, even in adults, may owe their origin to scarlatina which had occurred during infancy or childhood. The attack of pericarditis may have been altogether overlooked, and the chronic disease to which it has given rise may not have attained to such a height as to excite the attention of the patient himself, until many years have rolled past. Further, recent experience seems to show, that pericarditis is perhaps occasionally not incapable of spontaneous cure, and it is just possible that this complication may arise and disappear without the occurrence ever being suspected. We would warn, however, the practitioner against supineness under this view of spontaneous recovery. He must act as if he felt he had an ever active and dangerous enemy to contend against. *Ανακτος καθέυδοντος οί λαοί φράττονται.*

Again, it is worthy of notice, in connection with the question of the frequency of pericarditis as a complication of scarlatina, that it is only of late years that this affection has been noticed, during which time disease has been subjected to a narrow and strict scrutiny by instructed eyes, which was formerly almost unknown in any department of medical science.

It is anticipated that diligent inquiry will

not unfrequently succeed in detecting this complication for the future, and it is highly important that so momentous a complication be early discovered, in order that it may be speedily put down.

These objects, viz. an early discovery of the complication and a speedy extinction of the evil, will meet with much impediment if the profession be only partially informed on the subject, or if there be permitted to prevail an idea that the complication is only of very rare occurrence: Puchelt has aptly expressed the danger from this source. "*Nihil autem magis diagnosi juste verreeque obest quam preconcepta de raritate morbi ejusdam sententia; qui enim rarissimus habetur morbus raro quoque venit in mentem medici, et ubi adest aut omnino non, aut justo serius cognoscitur.*"—*De Cardidite Infantum Commentarius.*

Period of accession of pericarditis.—It is impossible to say positively at what period of the exanthem the affection of the heart supervened in the first case, for its presence was not suspected till the child was dying. But from the appearance which the heart presents, it is probable that the disease had existed at an early period. In the second case, the symptoms of pericarditis were strongly manifested on the seventh day of the exanthem, and two days after the disappearance of the eruption. In the third case, the knocking of the heart, and pain in the region of that organ, took place during the period of the eruption. Thus in two of these three cases the pericarditic inflammation took place during the first few days of the illness, and it is not at all improbable that such was the case also with the other.

Character of the scarlet fever.—In all the three cases there was what might be called considerable inflammatory fever; the eruption was vivid, and remained out the usual time. The fauces in all the cases were more or less inflamed and swollen. The urine, in the case of the boy Cook, was scanty and high coloured before pericarditis supervened; in the case of the boy Jones, the urine is said to have been scanty and high-coloured during the eruption. In the other case, viz. that which terminated fatally, the urine is reported to have been blood-red and scanty from an early period of the disease. Latterly it contained no albumen.

The mucous membranes are reported to have been unusually red in the case which terminated fatally; in the case of the boy Cook; the tongue was red with elevated papillæ; in that of the boy Jones the condition is unknown. Anarsaca of a very decided character showed itself in the cases of J. S. and the boy Cook, the swelling being general: in the third case, that of the boy Jones, it is reported by the mother that the face was swollen some time after the eruption. The

skin was very dry and desquamated freely in the fatal case, and in that of the boy Cook.

Painful affections of the joints occurred in the cases of Cook and Jones: the boy Cook suffered much in the nape of the neck and in the right wrist; Jones experienced pain all over the body, but particularly in the ankles. It is uncertain whether arthritic pains were experienced in the fatal case, but the patient, from a very early period of the disease, cried much whenever he was handled.

No information whatever is given of the character of the scarlatina in the cases complicated with pericarditis, by any of the writers who have noticed this complication. Rilliet and Barthez, Burrows, Copland, Joy, and others, are alike silent on this important point, at least so far as we have been enabled to ascertain. But Dr. Willis has informed us, that all, or nearly all the cases in which post-mortem signs of pericarditis were found, had been conjoined with anasarca.

In a case of carditis related by Krukenbergius which followed scarlatina—"cutis erat sicca, squaïda, non adco calida, urina parca et turbida sanguinem in se continere videbatur. Aliquot diebus præterlapsis facies turget."

It is worthy of notice, that all the patients were males, and under ten years of age.

Causes of pericarditic complication.—From a careful consideration of the particulars of the three cases above related, and of the pathology of scarlet fever, it appears reasonable to conclude that pericarditis, when it occurs as a complication of this exanthem, may owe its origin to two different sources, viz. the presence of the specific poison in the blood, acting as a local irritant, and extending throughout all the membranes and tissues of the body, and the presence of crystallizable compounds in the blood which should have been eliminated from the system by means of the kidneys, but which in consequence of disease of these emunctories are not unfrequently retained in the circulation.

With regard to pericarditis arising from the presence of the specific poisons in the blood, it may be stated that it is analogous to local inflammations which are wont to complicate continued fever, small-pox, and measles, during the first few days of their career. Arising in this manner, pericarditis may be expected to occur at an early period of the disease, *i. e.* during the eruption, or at the time it should appear.

So long ago as 1806, Dr. Wells said,—“Possibly the inflammation of the internal membranes, if it ever does exist, may be similar to that which occurs in the skin during the original fever.”

That pericarditis should occur in the course of, or subsequent to scarlatina, is not surprising. It is well ascertained that pericar-

ditis is liable to follow obstructive disease of the kidneys, and it is further familiar to all, that obstructive disease of the kidney is not uncommon during the convalescent period of scarlet fever. It would indeed be difficult to explain the circumstance, did pericarditis not occur under circumstances known to be productive of inflammation of other serous membranes. While we are not prepared to say that the three cases which have been related did not owe their origin to the first mentioned source, viz. the presence of the specific poison in the blood, we are much disposed to think, that in all the cases, but particularly in the fatal case, and in the case of the boy Cook, the complication was intimately connected with disorder of the kidney. In both of these cases extensive anasarca followed; and in the other case, the mother reported that the face of the patient was decidedly swollen, and that the urine was scanty and of high colour.

But in the cases of Jones and Cook, it may be objected to this view, that the affection of the heart preceded the disorder of the kidney. Now certain facts which have come to our knowledge, but which need not be detailed at length here, have demonstrated the fact, that the kidney is liable to be materially disordered within the first few days of the exanthem. The secretion of the kidney is diminished, and its chemical characters are altered. The appearance too of the kidney is also morbid, as we have had an opportunity afforded us of ascertaining. Yet, notwithstanding these conditions, the urine has not contained albumen, which we are disposed to believe is passed only some time after the kidney affection has become established, at least in some instances.

Nor is it unreasonable to suppose, that the kidney may become disordered at an early period, and thus lead to pericarditis and inflammation of other serous membranes. That organ is one of the chief emunctories of the body, and it is notorious that almost all the emunctories of the body are early implicated in scarlet fever—witness the skin, and mucous membranes.

The occurrence of affections simulating rheumatism forms, perhaps, further testimony of an early implication of the kidney. It seems probable enough, that these affections, like rheumatism and gout, depend upon the presence of crystallizable compounds either formed in excess, or not duly removed by the kidneys.

Treatment.—This may be resolved into preventive and curative. Preventive treatment must comprise means which will moderate the violence of the exanthem without unduly depressing the powers of the system, and rather direct the fury of the storm to the skin than to the internal organs. The curative treatment must be guided by

those principles which regulate the management of inflammation of other serous membranes. The importance of the heart must rouse to activity. But it will be the duty of the physician to keep in mind the storm through which the patient has passed, or must necessarily pass, and avoid unduly expending the powers of the system. General bleeding must be moderate when adopted, and employed only when the patient is still possessed of some considerable strength. Leeches and mercury, followed by counter-irritation, will be necessary. As a general rule, it would be prudent to avoid blisters and oil of turpentine, as counter-irritants, on account of the kidney. When the disease is connected with disorder of the kidney, which will be the case in most of the instances, that emunctory must be promptly treated. In the first place, it must be relieved by the local abstraction of blood (strength permitting), by warm bathing and purgatives, when not counter-indicated by diarrhoea, or irritable condition of the mucous membrane. As it is time to conclude, further notice of positive treatment must be omitted. One word on negative treatment. Every measure and every circumstance must be carefully avoided which would determine to the heart and kidney, and this rule should be observed whether our treatment be preventive, or whether it be curative. Further experience will probably prove that saline purgatives should be avoided when the kidney is diseased. The celebrated axiom of Sydenham, used in a modified sense, applied to the cold affusion of Dr. Currie in scarlet fever, will form an appropriate termination to our remarks on the treatment of pericarditis in connection with scarlatina—

"Eger non raro nulla alia de causa, quam iuniorum medicum diligentia ad plures migrat."

London, Feb. 1845.

OBSERVATIONS ON THE NATURE AND TREATMENT OF THE MORE IMPORTANT DISEASES OF THE NERVOUS SYSTEM:

With Illustrative Cases.

By EDWARD BLACKMORE, M.D. Edinb.
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Society of Edinburgh, and Physician to
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[Continued from page 638.]

CASE XXII.—A master mariner, aged 45, of a spare habit, while violently exerting his voice in August

1827, was affected with a sudden loss of speech for an hour, after which weakness of the limbs supervened. He then recovered for some months; but in April 1828, was affected with stuttering and a tremulous tongue. On May 27th, I saw him, complaining of vertigo and loss of memory, and weakness of the right leg: pulse tense; tongue furred; purgatives, blisters, and low diet, used for a week with much amendment. Then, on taking wine and eating heartily, he got severe pain at the right temple, with vertigo, and vomiting; the pulse was contracted.

Leeches, blisters, and purgatives.

In a short time he became as well as before the attack in April, except that slight causes would induce headache.

Purgatives continued.

July 17th.—At noon, a pain in the forehead, and temporary loss of speech.

Leeches and purgatives.

Then a tingling in the arms, confusion of the mind, and fulness in the head, but the pulse weak; blisters relieved him a little, but the speech continued affected, and the disease passed into mania.

CASE XXIII.—A man, aged 42, was affected in August 1828, with spasms of the lower limbs, palsy of the left leg, incontinence of urine, and an irregular state of the bowels: these symptoms were relieved for a time by blisters, liniments, and aperients; but in November 1829, he again came under my care, for long continued pain in the rectum, impeding walking, a sense of sleepiness and coldness in the thighs, and inability of bending them on the pelvis, and obstinate costiveness; his gait in walking was that of one in incomplete paraplegia: he had no head symptoms. Blisters, issues, and leeches on the loins, had been used with no benefit; he suspected a disease in the rectum, but none could be found on examination.

Cupping in the loins, and the turpentine liniment: blue pill; camphor $2\frac{1}{2}$ grains, thrice a day; and oily clysters.

By these means, he felt better in a fortnight; when, as he thought, the pain in the arms, and costiveness, was the cause of his inability to walk, (for

that eight months previously, on this being relieved, he could walk two miles!) Copaiba was given, with purgatives.

Dec. 10th.—Relief.

18th.—The gut irritated by the medicine.

22d.—The palsy remaining; half a grain of the powder of *nux vomica* was ordered every night.

25th.—A sense of “searching” in the rectum, and a discharge of flatus; the power of walking improved.

Medicine continued; and clysters of croton and olive oil.

27th.—A gentle aperient effect from the clyster; pain at sacrum, and twitching of the legs. In a few days, the nux was exchanged for strychnia, one-sixth of a grain thrice a day.

February 6th.—More power of the legs, preceded by more twitching, and the clysters act better.

10th.—Clysters discontinued, strychnia repeated, a third of a grain at a dose; the next seven days the benefit was continued; on the 17th, the strychnia was stopped, and clysters resumed, for pain in the back, and costiveness: afterwards croton oil was given every morning, and half a grain of strychnia twice a day to the 24th, with great relief: a scruple of strychnia was taken in a month. The heat and muscular power of the limbs remained better to March 10th, but the bowels still required aid, and castor oil answered best; the stools being then very deficient in bile, blue pill was added to the purgatives with considerable effect, the purging always being felt useful to the end of the month, when strychnia was again resumed: but it was soon dropped, as it seemed to make a feverish tongue; and castor oil, with liquor potassæ, was also continued to the middle of April, when being better, but not well, the medicine was discontinued.

CASE XXIV.—A lady, about 46 years of age, had influenza, in February 1837, after which she observed that her left arm and leg began to tremble, but without loss of feeling or of muscular power. At the end of a year she came under my care; the affected limbs cold and discoloured, but not feeling cold to herself; the bowels torpid; sleep lethargic; tremors constant, in-

creased in straining at stool, and relieved on piles discharging; pulse weak; menstrua regular; habits sedentary, and two glasses of wine taken daily.

Regulated diet; one glass of wine only, taken at noon; walking exercise in dry weather; compound decoction of aloes, and pills of colocynth, blue pill, and camphor; friction of the limbs with a hot flannel and hot salt.

This treatment relieved the bowels of an immense load of fæces, and was followed by considerable amendment in six weeks; but not by complete recovery.

CASE XXV.—A lady, beyond 40 years of age, had long been subject to severe rheumatic neuralgia of the shoulders and lower limbs, for which hot mineral baths had been tried unsuccessfully. The douche on the sacrum in her pregnancy had induced abortion with profuse hæmorrhage. For the general debility and semi-paralytic state of the legs, she had taken much quinine and the gum resins before coming under my care: at this time, she was nearly a cripple, the bowels lax, and the constitution debilitated. Her recovery was complete in the course of six months, after taking at first, Plummer's pill with rhubarb, decoction of *sarsaparilla* comp. with lime water, and iodide of potassium to a large quantity, after strychnia had been used in vain. The only local application was a tight flannel roller.

Section III.—ON HYDROCEPHALUS.

This disease presents some interesting varieties in its external form, whether occurring as a primary or a secondary affection.

(1.) Primary: *e. g.* (a) the leading symptoms—vomiting and costiveness, and pain in the head, inducing the idea that the bowels are the chief seat of disease, when a minute inquiry will discover some previous complaint of the head, with lassitude, drowsiness, and occasional vomiting. (b) A singularly obscure remittent form, in an adult, marked by a throbbing headache, with occasional vomiting, yet without sufficient illness to lay him up; then an aggravation of the symptoms; for which the usual treatment was used with relief, the pulse falling from 70 to

60; in three days an amendment, then a sudden relapse of agonising pain persisting for some hours and terminating in death without coma.

(c) In a boy five years old, the sutures, after having been firmly united, yielding to the distending force of the effusion, and becoming widely separated, and followed by an improvement in the coma and convulsions.

(d) The symptoms merely heaviness in the head and restlessness at night, slightly aggravated during dentition, yet inspection showing that at the very time serious organic disease was forming in the brain.

Experience will impress on every medical man the importance of directing attention to the head, whenever, in infants, shivering, lassitude, and fits of screaming occur, with either a depression of the circulation or febrile symptoms, without obvious disease in the chest or abdomen.

The relation of a particular group of symptoms to a particular seat in the brain, presents an interesting subject of inquiry: the same symptoms appear in many cases to be connected with different anatomical characters; such as vascularity, effusion of serum, and supuration; but the severity of the convulsions, and the early fatal termination of the case, has appeared to me to be often connected with disease of the medulla oblongata.

Convulsions generally accompany this disease in the young. In some very important cases in children, the early symptoms are those of depression of the nervous and vascular functions, as in idiopathic fever; the remittent character of which is apt to delude the attendant. The progress of such a case is often rapid; sometimes the vomiting subsides after the outset, and the bowels are soluble; the leading symptoms are delirium alternating with stupor; the vital powers then quickly failing, the pulse being simply frequent to the last.

In another variety the rise of the disease is very insidious and slow, marked by intermitting pain in the head, and vomiting occurring once or twice in a day; the illness not severe enough to prevent the child's continuing its school, or its play; yet at this very time a disease is subsisting that will be quickly fatal! An outburst of delirium is followed by irregularity of

the pulse, stupor, and death in a week from the first serious symptoms!

(2.) *Secondary Hydrocephalus.*

In a case of severe inflammation in the pericardium and diaphragm in the course of rheumatic fever, the first indication of disease in the head was high and persisting delirium. In another case, after two attacks of pulmonic inflammation at a short interval, the symptoms of a head affection were disturbed sleep, starting up in bed and shouting as if in a wild disease, but with no complaint of the head during the day: then loss of appetite, lassitude, wasting, for a fortnight: a cessation of all pulmonary symptoms on the head becoming affected: then vomiting, pain in the head, but not severe, for a few days; then, the first alarming symptom, the pulse suddenly becoming intermittent, attended with obstinate costiveness; then low vital powers, with hectic, convulsions, and the countenance and tongue as in synochus, and death on the sixteenth day from the acute attack.

Every practitioner has seen a severe threatening of the symptoms of hydrocephalus in connection with worms; the relation of the two conditions is probably not yet determined.

Cases occur of acute enteritis, which remits, and is followed by acute pain in the head, vomiting, and costiveness; yet little attention is directed to the real seat of the more important disease.

A most deceptive form of protracted encephalitis is met with, leading to organic disease; yet the symptoms, until shortly before death, are those of ileus! *e. g.* most urgent daily vomiting, with obstinate constipation for a month, yet the appetite unimpaired; no fever, no disturbance of the sleep, or of the mental faculties; the pulse nearly natural. The symptoms going on with slight remission for seven weeks; then an aggravation with febrile state, but the blood not inflamed; the bowels still appearing to be the chief seat of irritation: then coma, an irregular pulse, and death in a few days from the first unequivocal symptoms of a head affection.

The Prognosis.—In some cases, an unexpected but deceitful remission of alarming symptoms is seen, while collapse of the vital powers is going on: this exhaustion, however, is not

always fatal, if the pulse is not intermittent, and if the eye does not indicate pressure on the brain. Sometimes we see coma and convulsions subsiding, and general palsy remaining; the functions of organic life continuing for many weeks! Many severe symptoms, such as fever, convulsions, and coma, will remit, yet the dilated pupils and intermittent pulse show that incurable lesion is done to the brain. Sometimes, after a purgative, the pulse, which had been irregular, will become natural, yet the case will be hopeless.

Slight symptoms in these secondary cases should not encourage a too favourable prognosis. Sometimes death occurs in the midst of delirium, in the second week of the disease, without coma. In the slighter attacks, a remission of the more alarming symptoms is not to be too much depended on, while the tongue remains white and dry.

A cutaneous eruption supervening is a well-known favourable prognostic symptom.

The prognosis should indeed be always cautious; for, in many cases, at the moment that alarming symptoms set in, effusion has already begun. Irregularity of the pulse, continual tossing of the head, and a fixedness and dilatation of one pupil, are very bad symptoms; on the other hand, severe symptoms in a case protracted for two months, giving unequivocal evidence of effusion in the brain, have terminated in recovery. Sometimes, however, the utmost that medicine can do is to convert acute hydrocephalus into the chronic form, the inflammation, though controlled, going on to disorganise the brain, even when an improved state of the natural functions and of the nervous energies might seem to give a hope of convalescence.

The prognosis is to be founded on the severity and duration of the early symptoms, and on the treatment of the early state of the disease; for when this has been inadequate, there is little hope of recovery, although the alarming symptoms may for a time have remitted.

The blood not presenting the usual appearances of inflammation is a bad sign; as is the pulse becoming progressively more rapid and irregular: in one subject, fifteen years of age, it was as high as 206 shortly before death.

Convulsions, and especially tonic spasms in the latter stage, are generally hopeless.

Antecedent disease in any of the thoracic or abdominal viscera will give high importance to slight head symptoms.

Danger is not always announced by any particular set of symptoms: there is in some of the worst cases no vomiting, except at the outset of the disease, no costiveness, no screaming, no tossing of the head, no irregularity of the pulse; but delirium is succeeded by coma or convulsions, and rapid death. If one week has passed away, after decisive symptoms of inflammation, without adequate treatment, the case is often hopeless, whatever the symptoms may be in the second week of the disease.

Pathology of the disease.—In attempting to illustrate pathology by morbid anatomy, it is requisite to remember, that in the dead body the true condition of the organisation during life is not shown; the state of death itself, and the treatment before it, tending much to alter or to efface the natural anatomical characters.

Inflammation of any portion of the encephalon may give rise to the symptoms of hydrocephalus: there is no fixed relation of particular morbid changes to a particular group of symptoms; but inflammation at the summit of the hemisphere is characterized more by headache, delirium, and febrile symptoms, and inflammation at the base of the brain, by convulsions, and changes in the pupils and the pulse, and by rapid death, which occurs without profound coma. The seat of the inflammation is sometimes determined by the nature of the exciting cause: *e.g.* the medulla oblongata and the cerebellum have been especially inflamed after strong muscular exertion during exposure to the sun.

The scrofulous character of the inflammation is manifest; the disease often co-exists with scrofulous tubercles in other parts; and although this species of inflammation is most generally seen in weak constitutions, and exhibits a languid character, it is sometimes extremely acute, and rapidly induces intense congestion and serous effusion, suppuration, induration, softening, and ulceration. In some cases the disease is more of an erysipelatous

nature, extremely diffusive, and succeeding to external erysipelas; and most inadequately manifested in the state of the pulse and of the symptomatic fever.

Effusion into the ventricles is sometimes the direct effect of inflammation of the membrane lining these cavities; at other times, it is merely the effect of a determination of blood to the brain in general. This effusion is not always a sign that the morbid action was asthenic; the other morbid appearances (as well as the symptoms during life), such as a general enlargement of the arteries, diffused vascularity and fulness of blood, and firmness of the brain, prove that the disease is truly sthenic.

In an instance of acute inflammation which passed into a chronic state, supuration and inflammation of the inferior part of the brain was found in an infant five months old.

In a patient of a scrofulous family, in whom the disease advanced rapidly to its fatal issue in the second week, the pulse and fever did not adequately show the danger; the vomiting was little urgent, the bowels easily moved by medicine, and no convulsions had existed; yet there was found intense vascularity of the brain and its membranes, without much effusion.

In a case in which there was no screaming, no tossing of the head, no irregularity of the pulse, no vomiting, but lassitude succeeded by convulsions, delirium, and sinking of the vital powers, in the third week, we found marks of intense inflammation of the membrane, particularly about the tuber annulare, with much serous effusion. It was manifest here, that effusion had begun from the moment alarming symptoms had set in.

In a case where urgent vomiting and costiveness were for weeks the leading symptoms, to which at length coma was superadded, a scrofulous tumor was found in the inferior part of the cerebellum.

In one case, marked by intense but remitting pain in the head, without delirium, convulsions, or coma, an abscess was found in the hemisphere, with induration of the surrounding brain: yet there was an astonishing approach to convalescence while the supuration was going on. In another case we found extensive softening of the central and posterior parts of the hemi-

sphere, serous effusion, enlarged arteries, the membranes intensely vascular; the disease connected with scrofulous tubercles in the lungs: the symptoms at first obscure, slow in their progress, and finally resembling those of fever. In one case, sudden lethargy and syncope, preceded by torpor of the liver, appeared to arise from sanguineous congestion in the whole encephalon. In another case, slight marks of vascularity, and little serous effusion, were found in a cachectic state of the constitution in an adult, in whom headache, vertigo, confusion of thought, squinting, and convulsions, had indicated a very severe disease of the brain.

It is important to remember, that some of the symptoms of hydrocephalus, such as delirium, convulsions, and coma, do not always arise from the same condition of the organization; they may be really of a different nature in different cases, and at different periods of the same case; they are seen in an exhausted state of the system, as well as in a plethoric and inflammatory state of it; they are at one time truly designated nervous symptoms, and at another, inflammatory. In states where they have not appeared to arise from pressure combined with increased momentum of the circulation, they have been usually attributed to anæmia of the encephalon; but it seems probable that a congestion, and slow or impeded circulation of the blood in the dilated vessels of the part, which involves a want of oxygenated blood, is the true proximate cause of these nervous symptoms.

[To be continued.]

ON THE ERGOTIZATION OF THE TIPULIDÆ BY HYDROCYANIC ACID.

To the Editor of the Medical Gazette.

SIR,

A COMMUNICATION appeared, some time since, in the Dublin Journal of Medical and Chemical Science, from the pen of Dr. Scanlan, in which it was stated as an important practical fact, in reference to the effects of prussic acid on the animal economy, that it "*ergotizes the tipula, promoting parturition by strong convulsive efforts!*" Subsequently, the parturient exciting powers of this agent were gravely commented on by

the learned translator of Majendie's "Formulary," as a "curious truth," which had been ascertained beyond the shadow of a doubt.

We cannot well comprehend the nature of the inductive process which led to the experiment on the ill-starred tipula: nevertheless, it stands upon the record, and affords an example for one of those hasty generalizations in which many inquiring minds are prone to indulge, and which, in every age, have so seriously obstructed the progress of scientific truth.

The female tipula, or crane-fly, is provided with an ovipositor, consisting of a sort of pincers, or forceps, of a horny consistence, and sharp at the point. By gentle pressure, the eggs, which are extremely minute and black, like the grains of gunpowder, may be easily extruded. These eggs lie at the extremity of the abdomen, surrounded by strong symmetrical horizontal bands of muscular fibre, and so intense is the instinct implanted by the God of Nature in these creatures, to expel their eggs at the proper season, that it becomes a mechanical operation, which nothing but the death of the insect can prevent. If the abdomen be severed from the thorax by dividing the abdomino-thoracic articulation, the work will still proceed uninterruptedly. I once watched a mutilated female crane-fly, in the season of egg-laying; its head and thorax had been accidentally completely crushed upon the spot on which it had alighted; the abdomen being uninjured, alone preserved its vitality; still the process of depositing eggs continued as vigorously, though not, perhaps, so systematically, as if the insect had been perfectly entire. The same is recorded of the whole family. The *Cecidomyia Tritici*, of Kirby, deposits its eggs with such intensity that it may be readily taken, and when placed in a situation where its operations are perpetually interrupted, will continue its labour. This was observed by Mr. Shireff, an intelligent naturalist of East Lothian, who put a fly then laying between the face and glass of a watch, where it deposited its eggs, though its limbs were invariably entangled by the revolving moment-hand.

It is almost ridiculous, therefore, to deduce this new property of prussic acid from such an experiment as that of Dr. Seanlan; and we should be equally

justified in concluding that severing the head from the body, crushing the thorax, or otherwise mutilating the tipulidæ, are ergotizing agents, because the vitality of the abdomen not being destroyed, they do not interrupt the process of ovipositing.—I am, sir,

Your obedient servant,

R. H. ALLNATT, M.D.

Parliament Street, Whitehall,
Feb. 15, 1845.

EFFECTS OF THE CYANIDES.

NO III. CYANIDE OF SILVER.

To the Editor of the Medical Gazette.

SIR,

THE three accompanying cases, which have been casually taken from a great many, will indicate the poisonous properties of cyanide of silver.

It might, at first, be supposed from the insolubility of this salt, that little or no poisonous action would result from its entrance into the system, and my earlier experiments seemed almost to bear out this supposition, for when the compound, previously well dried, was introduced either into the stomach or peritoneal cavity of a healthy animal, no ill effects of any consequence were produced, if I except that when it was given by the mouth, it invariably produced vomiting and its own ejection; but, on pursuing these inquiries, I soon found that very different results were manifested when the cyanide of silver was administered in a moist state, just as it is precipitated, care having always been taken to free it entirely from every soluble compound; it then entered the circulation with facility, and proved a violent poison: for instance—

Exp. I.—Six grs. of cyanide of potassium were dissolved in water, and completely precipitated by a slight excess of nitrate of silver. This would form about 10 grs. of cyanide of silver, which, after being well washed, were given mixed with food to a young mongrel terrier; in ten minutes, the animal began to vomit, and soon the food, together with the cyanide, were ejected. The vomiting, however, still continued, and it threw up a quantity of thick mucus; in thirteen minutes, the dog lay down, apparently exhausted, and was much disturbed by the continued retching; in the course of a few mi-

minutes this subsided, and after the lapse of one hour the animal appeared to be perfectly restored and well. At this time, when its stomach was completely empty, 10 grs. more of the cyanide were administered; in two minutes it began to stagger, then fell, and was slightly convulsed, the head being drawn back, and its limbs extended; in half a minute more the convulsion became violent, the dog uttered loud cries, its respiration became difficult, and the action of the heart fluttering and irregular; in three minutes it threw up about an ounce of a thick mucus, without odour, but suspending the white cyanide of silver; from this time, the animal lay deprived of all voluntary motion, the sphincters of bladder and rectum became relaxed, and the action of the heart more and more tumultuous, fluttering, and beating with three or four rapid jerks at each inspiration; the breathing was also carried on with a peculiar sighing effort, the result of a sudden and deep inspiration; in fifteen minutes the eye had lost its sensibility, and could be touched without winking; after the lapse of half an hour the respirations had become fuller and easier, the heart's action more regular, and the eye had regained its sensibility, and I was led to believe that the animal would recover, but in another twenty minutes it again relapsed, had a few weak convulsions, and breathed with a moaning noise: from this time the respiratory efforts became slower and weaker, and at the expiration of three hours from the administration of the last dose, it died quietly, and without the least struggle.

The body was examined twenty-four hours afterwards. The pupils were much dilated; the vessels of the brain congested and full of black blood. The stomach contained about 2 oz. of a thick brown fluid, in which a little cyanide of silver still floated; it had a slight odour of prussic acid, was neutral to test paper, and gave ample evidence of the presence of both cyanogen and silver, by their appropriate reagents. The coats of the stomach were highly congested, and in many places the blood appeared extravasated. The lungs were collapsed, injected here and there in patches, so as to give them a mottled appearance; both sides of the heart were full, and the right gorged with black blood.

Exp. 2.—Five grains of moist, and similarly prepared cyanide of silver, were introduced into the peritoneal cavity of a small terrier; in four minutes it appeared uncomfortable, holding its nose to the ground, and going round and round as if it were about to lie down; in six minutes it lay as if it were tired or exhausted, but on being roused it got up and walked about. In fifteen minutes it lay stretched on the ground insensible, there having been no previous convulsion; but it had gradually become comatose, appearing to have slept off into this state; its breathing was now slow, and accompanied with a peculiar sighing and moaning noise. The eye was insensible to touch, the heart's action laborious, and in one hour, the respiration having become gradually slower and slower, it died without a single convulsion.

The body was opened the next day. The pupils were much dilated. The vessels of the brain full. The peritoneal cavity still contained a quantity of the white cyanide, and its walls appeared slightly congested. The right heart was full of coagulated black blood; the lungs collapsed and redder than natural.

Exp. 3.—Five grains of recently prepared cyanide of silver were injected into the jugular vein of a large bull terrier; instantly it began to cry and struggle violently, and on being released, it ran about uttering loud cries, as if it were in the greatest agony; in one minute it fell and was convulsed; the breathing became laborious, and in two minutes it was dead; a large quantity of clear fluid ran from its mouth, and this was followed by a white frothy liquid, both of which came from the lungs, for the trachea was full of it. On opening the chest the heart was found to be still fluttering, its right side gorged almost to bursting with black blood. The lungs had not collapsed, they looked paler than usual, and when cut into exuded the same white frothy liquid streaked with blood.

The question in this last case was, whether the effects had resulted from any specific agency of the cyanide, or whether they were merely due to its mechanical action in stopping the capillaries of the lungs; and to determine this five grains of chloride of silver were thrown into the jugular vein of

another dog; in both instances the greatest care was taken to exclude all air from the apparatus; in three minutes the animal fell, making great efforts to respire; these became still more energetic during the next minute, when it began to cry, but not loudly. No pulsation of the heart could be felt, notwithstanding the continuance of the respiratory acts, and in another minute it was dead. On opening the chest, the heart, as in the previous case, was still fluttering; its left side contained a little fluid blood, but its right as well as both cavæ were gorged. The lungs were paler than natural, had not collapsed, and when cut into they shrunk and exuded a little frothy fluid; but there was none of this in the larger bronchi or the trachea. Both of these experiments were repeated, in order to be certain of the results, and the conclusion was, that the cyanide killed the quickest, and that it produced convulsions which were not seen in the other cases. The ultimate effects of both, however, appeared to be the stoppage of respiration by the production of a frothy fluid in the air-cells and smaller bronchi.

Conclusions.—From all these experiments it appears that cyanide of silver acts as a local irritant, producing great vomiting and a congested state of the vessels of the stomach; that when it has been dried before its introduction into the system no other ill effects follow; but if it is administered in a moist state, it is then capable of becoming absorbed, and perhaps decomposed, for an albuminous solution has the property of dissolving the cyanide, and moreover the contact of it with any of the chlorides of the systemic fluids would produce a double decomposition, and the formation of a soluble cyanide, whose effects would be similar to that of cyanide of potassium.

The dose which is capable of killing a dog is five grains; its specific action seems to be on the brain, producing occasional convulsions, always coma, paralysis, a peculiar sighing respiration, a fluttering, irregular, and tumultuous action of the heart, and it ultimately kills by a gradual exhaustion of the involuntary acts, death taking place in from one to three hours after its administration.

The *post-mortem appearances* are a dilated pupil; an injected state of the vessels of the brain; the heart gorged and full of black blood, especially on its

right side; and when the poison has been administered by the stomach, that organ is exceedingly congested, completely emptied of solid matters, and may smell slightly of prussic acid; but there is no difficulty in detecting chemically the presence of both cyanogen and silver.—I am, sir,

Your obedient servant,

H. LETHEBY, M.B.

Lecturer on Chemistry at the Medical School of the London Hospital.

12, Tredegar Square, Feb. 17, 1845.

ANALYSES AND NOTICES OF BOOKS.

“L’auteur se tue à allonger ce que le lecteur se tue à abrégé.”—D’ALEMBERT.

Outlines of Chemistry, for the use of Students. By WILLIAM GREGORY, M.D. Professor of Chemistry in the University of Edinburgh. With numerous engravings on Wood. Part I.—*Inorganic Chemistry.* Taylor and Walton. 1845.

WE congratulate the Edinburgh School of Medicine and Philosophy on the appearance of this ably compiled, unambitious little volume, as an earnest of the resuscitation about to be effected in the vital chemistry of that city, after half a century of torpor. The researches of the late Professor, Dr. Hope, on Strontites, which gained him his chair and his reputation, were made in the preceding century at Glasgow, and, as was well known to the Doctor’s friends in that city, were made with the ingenious but unacknowledged aid of Mr. John Laurie, the chemical operator in the great firm of Knox, Tennant, and Macintosh.

Though Dr. Gregory’s work is professedly designed for the perusal of students attending lectures on chemistry, yet we cannot agree with its modest author, that such is its exclusive use; for it exhibits in a compact and economical compass a lucid systematic detail of the leading facts of the chemistry of inorganic bodies.

The subjects of heat, light, electricity, and magnetism, are properly relinquished by our author to the writers on natural philosophy; by several of whom, especially in France and Germany, they have been treated with equal profundity and copiousness. In those cases where these imponderables come into close contact with chemistry,

Dr. Gregory has not neglected their mutual illustration; and he justly enjoin all his students to make themselves acquainted with the principles of physics.

There is one feature of the work, to which, in common with the author, we would direct attention. After describing chemical processes and changes, he adds a symbolical representation of the reaction in the form of an equation. This plan, so well fitted to simplify the comprehension of the metamorphosis, and to imprint it on the memory, has been generally adopted by Professor Gmelin, in his admirable *Handbuch*, now in progress of publication. Such equations, given in a few letters, serve also to guide experimenters in the proportions required for laboratory operations. We are inclined to think that he might also have imitated the learned Professor of Heidelberg, in his repudiation of the binary salt hypothesis, who states several facts evidently inconsistent with the notion that the salts hitherto regarded as consisting of an acid combined with an oxidised base, are composed of an acid, plus oxygen, combined with the metal itself; and that, accordingly, hydrogen, and not oxygen, is in all cases the acidifying principle. In the present state of our knowledge we do not see any practical advantage in this hypothetical representation of the acid and saline bodies.

In the first portion of the Outlines, the doctrines of the elements, combustion, decomposition, and definite proportions, are well discussed. Under the head of Atomic Theory, there is a succinct account of chemical symbols, equations, and formulæ; as also combinations by volumes. We have next a distinct statement of the somewhat intricate subjects of isomorphism and isomerism. He then proceeds to the details of the simple bodies, which, after the late fashion of compilers, he groups under two classes of metalloids and metals. Now Dr. Gregory, who is a classical scholar, as well as a chemist, knows that the affix *oid*, from the Greek word *ειδος*, signifies *form* or *state*; and surely neither oxygen nor nitrogen betray anything metallic in their nature or aspect. Even chlorine, one of the most condensable of the gaseous "metalloids," shows no metallic appearance under the intense solidifying power, recently applied to it, in the admirable

researches of Professor Faraday. Hydrogen alone might with some plausibility be styled a metalloid, since it forms with the elements of ammonia an alloy possessed of metallic properties.

The section on symbols and formulæ, equations and their uses, will prove to the student a most valuable part of the book; enabling him to pursue the complex investigations of Liebig, Berzelius, Dumas, &c. through every atomic permutation.

As one example of our author's luminous manner of writing, we insert the following paragraph from the article Hydrogen, p. 52.

"In relation to acids, therefore, water acts the part of a base; in relation to bases, that of an acid; and in relation to neutral salts, that of a neutral or indifferent substance, or, indeed, of a neutral salt. Taking the three examples of hydrated sulphuric acid, HO , SO_3 , hydrate of potash, KO , HO , and dry sulphate of iron, FeO , SO_3 , + HO , it is to be observed that the water in the first can only be replaced by a base, such as potash, KO , which would yield sulphate of potash, KO , SO_3 ; the water in the second can only be replaced by an acid, such as sulphuric SO_3 , which would yield the same salt, KO , SO_3 ; and the water in the third may be replaced by a neutral salt, such as sulphate of potash, KO , SO_3 , which would give rise to the double salt, FeO , SO_3 + KO , SO_3 . Water in these three different characters is called basic water, hydratic water, and saline water, and, in addition to these, we have water of crystallisation."

In treating of the analysis of atmospheric air by explosion with hydrogen, Dr. Gregory has committed a curious oversight, which will perplex most readers. He has given, with his usual neatness, a figure of Ure's modification of the eudiometer of Volta, but has described the apparatus and manner of using it as if it were Volta's upright glass tube, from which, as is well known, by the sudden expansion, an unknown proportion of the gases is apt to be ejected, so as to render the result fallacious. Ure's syphon eudiometer obviates this evil; for when the electric spark is made to pass between the two points of the platinum wires, near the sealed end of the glass syphon, this is not inverted in either water or mercury, as Dr. G.'s description leads one

to suppose, but is removed from the pneumatic trough, and applied with the hand to the electric machine as the woodcut shows it, while the open end of the syphon-tube is closed with the point of the finger. The expansion of the exploding gas in the sealed leg of the syphon cannot now cause any discharge of gas, but merely a momentary compression of the atmospheric air in the space between the finger and the surface of the mercury, and this recoil upon an elastic fluid prevents the glass from being broken by the most violent explosions, even of olefiant gas with oxygen.

From Dr. Gregory's figure of the apparatus for distilling phosphorus from the usual mixture of acid phosphate of lime and charcoal, we surmise that he has never performed that troublesome operation upon any scale, for he represents the neck of his retort, and its prolongation tube, both in a horizontal position, whereby he would soon find them to become so obstructed by the condensed product as to cause the retort to burst. The neck of the retort should, on the contrary, be inclined downwards at an angle of nearly 45° , and its beak be directly dipped just beneath the surface of water in a basin. Even under this disposition for favouring the running down of the liquified phosphorus, the neck of the retort sometimes needs to be made pervious by placing a hot iron or cinders under it. At page 110, a clerical error occurs which may puzzle students. "When no more phosphate of lime is formed, the whole is digested with cold alcohol, and the clear solution allowed to stand as long as it deposits crystals of phosphate of magnesia." As no magnesia is present, it is impossible to imagine how crystals of its phosphate can be produced.

Our author describes, with habitual precision, the usual process for preparing sulphuret of carbon; but in referring to that form of a condenser tube in which cold water is made to flow upwards between it, and its tubular case, he calls this useful contrivance Liebig's condenser; not being aware that it was invented and made the subject of a patent in this country nearly thirty years ago, by Taylor and Martineau; and was by them mounted upon a great scale in the Apothecaries' Hall, and many other establishments. Liebig's

condenser is merely one member of that many legged zig-zag most compact and powerful refrigerator. It is probable, however, that the great chemist of Giessen knew nothing of Taylor and Martineau's plan when he constructed his condenser.

As a specimen of our author's happy talent for practical tuition, we quote his instructions for preparing pure hydrate of potash, an essential chemical reagent not a little troublesome to make in the common way.

"*Syn. Caustic Potash.* $\text{KO}, \text{HO} = 56.176$.—This important compound is best prepared by acting on pure carbonate of potash, dissolved in water, so as to deprive it of carbonic acid. Two parts of carbonate are dissolved in twenty of boiling water in an iron pot, and one part of quick lime, being previously slaked by covering it with boiling water, so as to form a kind of cream of slaked lime, is added to the boiling liquid in small portions, the mixture being allowed to boil a minute or two after each addition. When all the lime has been added, the whole is to be boiled for five minutes, care being taken to keep up the original quantity of water; since, with less water, the potash actually takes back the carbonic acid from the lime. The vessel, which ought to be more deep than wide, is then covered up with its lid, and allowed to stand for 24 hours. At the end of that time, if the above directions have been exactly followed, $\frac{2}{3}$ of the liquid may be decanted off perfectly clear and colourless. This is a pure solution of potash, and to obtain the hydrate we have merely to boil it rapidly down, in a clean deep iron or silver vessel, till the residue flows like oil. It is then poured out on a plate of silver, and, on cooling, broken up into fragments, and preserved in well-stopped bottles."

Under arsenic, he details at length the elaborate processes of Fresenius and Babo; and recommends the often prescribed antidote of hydrated peroxide of iron; which we fear will prove an utterly abortive means of neutralizing solid particles of arsenious acid in contact with the coats of the stomach. For the detection of the poison and measurement of its quantity, in any liquid, the committee appointed by the Prussian Government have recently contrived an exceedingly neat apparatus, which deserves to be gene-

rally known to medical men, and which we shall describe in a simplified form in the next number of the *GAZETTE*.

We take leave for the present of Dr. Gregory, impressed with a deep sense of the obligations which he has conferred on the study of chemistry in this country by the publication of his *Outlines*; and we look with anticipations of increased pleasure for the appearance, promised in spring, of the second part of his work, on *Organic Chemistry*; a department in which he has become no mean adept, under his celebrated German master. Medical practitioners, who wish to bring up their arrears of chemical knowledge, cannot do better than make themselves familiar with Dr. Gregory's work.

Contributions towards a Fauna and Flora of the County of Cork; the Vertebrata by DR. HARVEY, the *Mollusca*, &c. by J. D. HUMPHREYS, the *Flora* by DR. POWER. London: Van Voorst. 8vo. pp. 130.

THIS slender volume comprises a set of elaborate catalogues, forming part of a series of communications on the local history of the county of Cork, which have from time to time been contributed to the Cuvierian Society of that city. It is calculated to be a useful guide-book to naturalists who may explore the above district of Ireland. Its authors deserve great credit for the ability displayed in collecting and arranging the amount of scientific information it contains; for it is by no means an easy task to compile a work of the kind.

MEDICAL GAZETTE.

Friday, February 21, 1815.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

THE QUESTION OF MEDICINE STAMPS.

It has been repeatedly urged in many of the petitions lately forwarded to Parliament, "that Government should not lend its sanction to empiricism, by granting patents for secret medicines."

We do not pretend to extenuate or deny the principle of quackery being thus ostensibly licensed; but we submit, with all deference, that the question is one of state finance, and with which, consequently, medical men have no proper right to interfere. In the year 1783, when the nation had been drained by a long and expensive war, it was found necessary to raise the sum of £650,000, in order to pay the interest of a loan of twelve millions sterling. Lord John Cavendish, the then Chancellor of the Exchequer, proposed, along with other things, quack medicines as very fit objects of taxation; and he believed that the House of Commons would be surprised at the amount which he had good grounds for anticipating would be thus realized, namely, £15,000 a year. It was accordingly provided, that "all persons who sold medicines, and who were not regularly bred to the profession of doctors," &c.* should take out a license; and this being done, there should be a duty of 8d. per cent. laid on the medicine. The love of being drugged, so conspicuous among the English, Lord John Cavendish foresaw might be turned to good account; and there he was right, for the tax has occasionally produced nearly treble of what was originally contemplated.

Having been at some pains investigating this matter, we are glad to perceive that the revenue derived from so disreputable a source has been gradually declining during late years, as the subjoined tabular statement, deduced from the most recent Parliamentary Returns, will shew:—

Medicine Stamps.

1831.....	£39,084
1832.....	44,379
1833.....	38,375
1834.....	31,007
1835.....	30,516
1836.....	31,376

* Parliamentary History for 1782-83.

1837.....	30,495
1838.....	29,422
1839.....	29,858
1840.....	29,492
1841.....	30,289
1842.....	30,502
1843.....	28,936

In proportion as people are better educated, and information more extensively diffused among them, will the lust for nostrums diminish. We infer this from the fact that in Scotland there is scarcely any sale for articles of the sort. This may, no doubt, be partly due to the circumstance that in the above country drugs have never acquired in vulgar estimation that exaggerated value which must inevitably be the case wherever medical men are remunerated for their wares and not for their attendance. We are firmly convinced, that were the profession established on one general scientific footing, to the exclusion of all trade in pharmacy, the proceeds from stamps and patents to the sale of secret remedies would eventually dwindle to a nullity. Ministers might in this way be saved the trouble of repealing so odious an impost.

It has been said, can any reason be given why you should prevent a man from bettering his fortune by making a useful discovery in medicine, when in every other department of science and art the State allows individuals to protect themselves by concealment, or affords them the exclusive use of their invention for a certain time, if they chose to make it public? To this our answer is, that nearly all the so-called discoveries in medicine which their authors have thought fit to shield by patent, have been mere impositions. Let a man who has found out anything new and important, communicate it fairly and openly, and he will have his reward.

The Marquess of Normandy expressed a hope last week that Govern-

ment was prepared to introduce some stringent regulations which would have the effect of putting a stop to the indiscriminate sale of drugs now permitted. We think Government could not do better than modify Lord J. Cavendish's preamble, by enacting that all persons who sold medicines, and who were not regularly bred to the profession of doctors, &c. should take out a license, after having been properly educated and duly examined by a Board under its own control.

MOVEMENT IN THE PROFESSION.

WE have received a printed document, of the 12th current, signed by eighty members of the Royal College of Surgeons practising in Hampshire, addressed to the Council, expressive of their great dissatisfaction, and of the deep sense of the injustice with which they have been treated under the new charter. These members protest against the injustice by which six hundred of the body have been arbitrarily selected to form a higher class, who have neither had a better classical education, a more extended professional one, nor have submitted to a stricter examination, than themselves; whilst they, their professional equals, are required to submit to a second examination in order to attain the rank bestowed without examination on the others.

A copy of a remonstrance to the same purport as the above has been forwarded us from Bath, and to which forty-one names are attached. It was signed, we are informed, within a few hours, by almost every member of the College practising in that city.

The National and Manchester Associations have each propounded their views as to what should be the main points of the charter they desire. On one head they are absolutely at variance. The Manchester Association proposes that the country members should vote by proxy, while the National Association would wholly exclude proxies. Now, says the *Times*, this would be most unjust to the country members; it would virtually deprive them of all direct influence in the government of the College, throwing it almost exclusively into the hands of

the London members; and it may be easily foreseen "that unless the National Association agrees to voting by proxy, they will soon be national only in name. They should at once declare their approval of voting by proxy; if they do not, they will speedily find themselves deserted by almost the whole of the country practitioners."

MEDICAL TESTIMONY.

WE were reminded of Chief Justice Dallas' memorable declaration at Severn and King's trial, that "these are not days of triumph, but days of humiliation for science," on perusing the report of a case tried in the Court of Queen's Bench on Saturday last. The nature of the action was as follows:—The defendant, a gentleman of the name of Lowe, aged 64, but vigorous and healthy, was about two years ago seized with a pain in his toe, which turned out to be spontaneous gangrene. He applied to Mr. Baker, a surgeon at Hampton, and the plaintiff in the cause, who administered stimulating medicines, with brandy, meat, and wine; and after four or five days removed the toe. The disorder continued, however, to spread over the foot; and Mr. Liston, who was called in, cut off that also, after having in vain tried to save it by the adoption of the "soothing system," the very reverse of Mr. Baker's, consisting in the abandonment of "stimuli," in the administration of sedatives, and in temperance and quiescence. Subsequently the plaintiff continued his attendance upon the defendant, and finally sent in his bill, which included 437 visits at 7s. 6d. each, with a charge of £13 for medicine,—in all £193 odd. The defendant, loth to part with both his foot and his money, refused payment, and the action was brought to recover the amount.

The counsel for the plaintiff, anticipating the defence, brought forward three surgeons of note, together with Mr. Liston himself, in order to prove the propriety of the treatment. Their joint evidence went to show that "spontaneous gangrene was not the result of any previous external injury to the part affected, but the symptom and the consequence of a debilitated constitution, and that such debility may co-exist with the appearances of health and vigour in the patient, and that it might therefore have been pro-

per in such a case, as the one in question, to have administered stimulating medicines, and to have allowed stimulating diet." In the face of all this comes the evidence of other three surgeons of repute, who give as their deliberate opinion, taking the representation to be correct, that the administration of brandy, meat, and wine, was totally incorrect, as it must have tended to increase the inflammation and extend the disease. Further, that to cut off the toe was the worst course which could have been pursued, as the necessity for amputating the foot appeared to have been the result of removing the toe; in short, that the treatment of the case was wholly improper.

Notwithstanding such conflicting testimony, the jury, after having retired for about half an hour, found a verdict for the plaintiff, £138 14s., in arriving at which sum they calculated the visits at 5s. a-piece.

THE NEW POLAR EXPEDITION.

THE ADMIRALTY'S TREATMENT OF THEIR MEDICAL OFFICERS.

SOME months ago, speaking of the treatment which medical men are so apt to receive from the various public departments of the state, we had occasion to mention the shabby way in which the medical officers of the late Antarctic Expedition had been met. Every officer engaged in that expedition, from the Commander downwards, received a step on his return, save and except the medical officers; they alone got nothing; naked they went out, naked they came home, naked they still remain! Yet did these officers voluntarily consent to expatriate themselves from their homes, and to encounter the dangers of unknown seas, for the long period of four years, and finally brought back their crews without the loss of a man from disease. More than this, the Antarctic Expedition was without any naturalist beyond a botanist; and as for the prospects that could be entertained of a botanist being of any use among the ice-bound islands or continents of the Antarctic ocean, he might as well have been left at home; but where the vegetable world fails, there does the animal kingdom teem with unusual life; and so it turned out. The medical officers of the Antarctic Expedition performed

the duties of general naturalists, and brought home many new and unknown, and interesting specimens, both of minerals and animals.

There is another Polar or Arctic expedition in process of being fitted out, the *Erebus* and *Terror* are getting ready in the river for the Polar Seas. Surgeons, we presume, will be required for these ships; but will any be found ready to volunteer their services in an expedition from which nothing is to be looked forward to but risk and privation in its course, heartless neglect when it is concluded? We have heard it stated that the surgeon who accompanied Captain Back was actually the *eleventh* who had been appointed—ten struck—would not go; the *eleventh* had it signified to him that he had better make a virtue of necessity, and accept. Our brethren have had the farther experience of the Antarctic Expedition to cool their zeal for Her Majesty's Naval Medical Service; and we trust that the Director-general of the Navy Medical Department will find not *ten* but *twenty* surgeons with courage enough to say nay to his proposals for a voyage in either the *Erebus* or *Terror*; the conclusion of which, in so far as the medical officers are concerned, will be an accumulation of scurvy treatment from superiors in office, and as the result of this, of contempt and neglect in the eyes of the world.

In the late army Brevets the poor medical men were alone neglected. Even the Commissariat were not overlooked: the provider of forage, of beef and mutton, soap and candles, and other mercantile matters for the army, had their benefit of these brevets; the men of science and education were alone left out of the question.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Tuesday, February 11th, 1845.

MR. STANLEY, President, in the Chair.

On Extravasations of Blood into the Cavity of the Arachnoid Membrane. By Mr. PRESCOTT HEWETT, Curator of St. George's Pathological Museum.

THE author, for the sake of perspicuity, arranges the extravasations in four divisions, according to their degrees of simplicity.

1. The extravasated blood may either be liquid or coagulated; if in the latter state, it may be in clots, or spread out in the shape of a thin membranous layer.

2. Sometimes the extravasation presents itself under the shape of a false membrane, possessing more or less of the original colour of the blood.

3. The blood may be fixed to the free surface of the arachnoid, and there maintained by a membrane which, to the naked eye, presents all the characters of the serous membrane itself.

4. The blood is frequently found enclosed in a complete cyst, of various degrees of thickness, which may be removed unbroken from the cavity of the serous membrane.

The author, having fully considered the various appearances put on by the extravasations mentioned in the first and second division, which were illustrated by cases and preparations, passes on to the more important subject of the third division, which, he thinks, derives an increased degree of interest from the fact, that these cases were for many years described as "extravasations of blood between the dura mater and the parietal arachnoid." After having quoted a case thus described by Dr. Hodgkin, he states that the result of the investigations carried on within the last few years by several foreign pathologists, and by himself, is so directly opposed to the opinion adopted by Dr. Hodgkin, that he cannot but think that that author has been led into an error, of which the case itself bears, he thinks, internal evidence. All recent investigations, illustrating this point, tend to prove, that the fine delicate membrane which covers these extravasations is not a portion of the arachnoid stripped off from the dura mater, but a newly formed membrane. This opinion is confirmed by the cases related in the fourth division, which were also, at one time, described as "extravasations of blood between the dura mater and its serous lining;" but the correctness of this opinion is made manifest by the stripping off of the cyst containing the blood from the parietal arachnoid to which it has become adapted. These points were illustrated with cases and dissections, of which two preparations were exhibited.

The author next proceeds to examine how this membrane is formed. He dissents from the generally received opinion, that it is the result of an exudation of lymph poured out from the arachnoid irritated by the presence of the blood; and thinks that the fibrine of the extravasated blood gives rise to the false membrane, independent of any inflammatory action in the neighbouring tissues. This he illustrates by various cases in which there were no appearances of inflammation either during life or after death.

1. Blood extravasated into various serous cavities, and covered over by a false membrane, without the least trace of inflammation in the neighbouring tissues.

2. Blood extravasated into tissues also becomes surrounded by a membrane, dependent upon the fibrine of the extravasated blood.

5. Even blood coagulated in the vessels at times is covered by a false membrane, also dependent upon the fibrine of the blood. Here are given two cases of large aneurism, cured by nature, in which the surface of the coagula was covered by a delicate membrane similar to the membrane of the artery; and one case in which a clot of blood was found, in a vein, covered by a delicate membrane, in which were several large vessels, as yet unconnected with the general circulating system.

With regard to the source of the hæmorrhage, the author thinks that, in those cases where no ruptured vessel has been detected, the blood must have been produced by an exudation from the rupture of some vessels so minute as to escape the ordinary means of investigation.

These extravasations the author has generally met with in cases where there has been a decided determination of blood to the head. He has met with them in cases of great and protracted anxiety of mind, in poisoning by opium, in drunkards, in delirium accompanying phthisis, in maniacal patients, and in aged people, in whom the arteries have been thickened by atheromatous deposit.

The author having pointed out the difficulty of the diagnosis in those cases which have been found to present the symptoms of diseases of a totally opposite character, concludes by directing the attention of the Society to the remarkable circumstance, already observed in several cases, of an intermission in the symptoms, either of coma or even of paralysis.

Mr. Stanley referred to a question propounded in the paper as to the proportion borne by cases of false membrane from effusion simply, to those resulting from inflammation.

Dr. Mayo made inquiry whether the false membrane itself did not present appearances by which its true origin could be determined; whether, in fact, it was the result of inflammation, or of mere effusion of blood?

Mr. Hewett replied, that the distinction between the appearance produced by an inflammatory effusion and those of an effusion of blood into the cavity of the arachnoid, might, he thought, be established; in the first case, the investing membranes of the brain were thickened and vascular, with effusion most frequently in the sub-arachnoid

cellular tissue, whereas, in the second case, the cerebral arachnoid generally retained its natural polish and thickness, and presented no increased degree of vascularity.

Mr. Stanley referred to some preparations of false membrane in the museum of St. Bartholomew's Hospital. In one of these cases the membrane was so adherent to the dura mater, that Mr. Abernethy at first sight considered it to be the arachnoid, but on separating it from the dura mater, that membrane was found perfectly smooth beneath it. In another case in which the patient had been maniacal for some time before death, the false membrane extended over the entire dura mater; and in another instance, there was a double false membrane, with effusion into the sac.

Dr. George Burrows made some inquiries of Mr. Hewett, in consequence of the abstract which had been read being insufficient to convey an adequate idea of the author's meaning. The cases before the Society had reference to the interesting question as to whether the blood of the extravasation retained its vital properties, and had the capacity of self-organisation? The delicate false membrane which surrounded these extravasations of blood into serous cavities, had the important properties, after becoming vascular, of acting as secreting and absorbing surfaces. It was, indeed, through the medium of these membranes that the extravasated blood became absorbed, and through their agency also, the irritating effects of these extravasations, which acted as foreign bodies, were mitigated and circumscribed. It did not appear from the paper, that it was clearly determined whether the false membranes in question were the result of a mysterious vital process in the effused blood itself, or whether they had their origin from the vessels of the contiguous serous membrane. He, Dr. Burrows, considered that the blood when effused had the capacity of exerting this vital power; but under these circumstances, as it acted on a foreign body, and, of course, produced more or less irritation in the contiguous parts, these vessels, under such influence, might throw out lymph or fibrin which might become organised at a subsequent period; although the vascular actions, or excited, might not amount to inflammation. Mr. Hewett conceived these membranes were not the result of vascular action in the arachnoid, because on examining its surfaces there were no signs of the existence of previous inflammation. Dr. Burrows inquired whether the author, in stripping off layers of lymph which had resulted from genuine inflammation, had not occasionally found the subjacent serous tissue scarcely at all altered in structure, and without any signs of increased vascularity? He, Dr. Burrows, had observed

this condition in the pleura, pericardium, and peritoneum, when they were thickened by effused lymph. These false membranes, highly vascular, were often found around extravasated blood in the substance of the brain. Dr. R. Bright, in the "Medical Reports," had given illustrations of some of these cysts which had formed round clots of blood in the substance of the brain. These sacs appeared to be more connected with the surrounding cerebral substance than with the extravasated blood.

Dr. Webster, like Dr. Burrows, complained of the abstract of Mr. Hewett's paper just read. It failed to fully elicit the views and opinions of the author. He wished to inquire of the author the effects which changes of structure of the arachnoid had on the mental faculties. In 72 cases examined by Mr. Lawrence at Bethlem, nearly a fourth exhibited thickening and opacity of that membrane of the brain. Mr. Stanley's case was an illustration of the fact also. Had Mr. Hewett observed maniacal symptoms in any of the cases he had detailed?

Dr. Cursham observed that one of the cases recorded in the paper was phthisis accompanied by mania.

Mr. Henry Lee stated that it appeared to him that the conclusions arrived at by Mr. Hewett were of the greatest importance, inasmuch as they involved the acknowledgment of an inherent power in the blood of generating vessels, and that quite independently of any increased action in the surrounding parts. But in estimating the truth of this proposition much important evidence is gained by considering the analogous processes which take place under similar circumstances in other parts of the body. Mr. Hunter states that when a small extravasation takes place in the cellular membrane, if the blood coagulates, the union of the ruptured vessels is produced by the coagulum becoming vascular; and he also states that when the coagulum is large the whole will not become vascular, but that surface only which is in contact with the surrounding parts. The analogy between this process and that described by Mr. Hewett appears sufficiently evident. Another illustration of the same subject is where blood has been retained for a considerable time in a vein by means of pressure. The exterior portion of the coagulum, as in an instance to which Mr. Lee referred, will shew a thin firm layer, distinct from the central and more uniform substance. This layer may be mistaken for lymph effused upon the lining membrane of the vein as the result of inflammation. The chief diagnostic mark between the two is, that whereas the lymph adheres to the whole surface from which it is secreted, the layer derived from the coagulum

of the blood has very partial adhesions, and may be separated from the coats of the vein with the greatest facility. A difficulty may present itself in considering in what way it is possible for vessels to form spontaneously in a coagulum; but in granting this power to exist, we allow nothing more than that which continually takes place in the development of the fœtus, where the blood is formed before the capillary, the capillary before the vein, and the vein before the heart. But from whatever source the vessels are derived, the mode of the formation of the false membranes, or the exterior vascular layers, would appear to be strictly analogous in all the cases referred to.

Mr. Solly, in all cases of patients dying from acute mania whom he had examined with Dr. Conolly at Hanwell, had always found effusion of blood upon the surface of the brain. In respect to the diagnosis of effusion of blood upon the brain, he had found one symptom invariably present, and this was, an acute pain in the head.

Dr. Dickson confirmed a statement of Mr. Hewett with respect to the alternation of coma and paralysis in one case which he had seen with that gentleman. In that case there was no effusion into the arachnoid, and no adhesion of the false membrane, so that it was difficult to conceive that it had been the result of inflammation. He recollected seeing, in 1827, in the Hôtel-Dieu, a case in which there was aneurism of both popliteal arteries. Dupuytren refused to operate, as the arterial system generally was diseased. The man died, and in the larger aneurism there were twenty or thirty layers of false membrane, and in the smaller, ten or twelve layers. The disease was of old standing in one of these, and here the layers were like serous membrane. In the more recent tumor the layers were thicker, resembling the buffy coat of the blood after it had been subjected to pressure.

Mr. Prescott Hewett had had frequent opportunities for detaching a false membrane from a serous surface, without finding any increased degree of vascularity in the serous membrane; but then these cases were, as Dr. Burrows had stated, of some standing, whereas the cases mentioned in Mr. H.'s paper were, for the most part, quite recent. Of this, the case read by the Secretary was a good example. The patient having survived a severe injury of the chest nine days only, the pleuræ was found filled with blood, completely enveloped in a false membrane two lines in thickness, and yet the serous tissue, in contact throughout its whole extent with the newly formed membrane, presented, with the exception of very slight roughness, the appearance of the opposite pleura, which was quite healthy. Mr. Hewett thought, that the pleura, had

the false membrane been the result of inflammatory effusion, would have, at so early a period as nine days, presented at any rate some signs of inflammation. He had come to the conclusion that the blood possessed the power of producing from its fibrine a false membrane, without the intervention of any inflammatory action, from many dissections which he had made, the details of which were given in his paper. He mentioned a case in which a loose coagulum enveloped in a transparent membrane with a smooth and polished surface, was found in the superficial femoral vein, the cavity of which it did not completely fill. The internal surface of the vein presented a perfectly natural appearance, with the exception of a few points where it was slightly adherent to the membrane enveloping the clot. He alluded also to some cases of aneurism cured by nature, in which he had found the slightly cupped surfaces of the coagula blocking up the aneurismal opening, which was about the size of a crown-piece in one case, covered over by a false membrane, so beautifully adapted to the original serous membrane of the artery, that it was impossible to point out the exact limits of each of these membranes. The false membranes enveloping the extravasation of blood, so often found in the ovaries, afforded, he also thought, a good example of this power of the blood. But one of the strongest proofs which he had seen of this power was in a man who survived injury of the head for nine days. In the cavity of the arachnoid was an extensive extravasation of blood divided into a visceral and parietal position; the visceral portion formed a thin, smooth, and flattened clot, which corresponded to the whole of the upper surface of the hemisphere. The parietal portion was disseminated in patches of various sizes and thickness, many of which were firmly bound down to the free surface of the serous membranes by thin delicate membranes of a fawn colour, with smooth and polished surfaces, and bevelled off at their margins so as to be adapted to the original serous membrane. Had the membranes covering these clots been the result of inflammatory effusion, they must have been produced by the visceral arachnoid, but that membrane could not have been produced by them, for it was, as already stated, covered by a layer of coagulated blood. Extravasation of blood in the cavity of the arachnoid had been frequently found in maniacal patients. Mr. Hewett had observed intense pain in the head in one case only, in which the pain put on the character of brow ague, lasted for two or three hours, and then disappeared, but recurred, for several days, twice in the twenty-four hours. The symptoms then became typhoid.

Dr. Burrows inquired, what was meant by an alternation of coma and paralysis, as referred to both by the author of the paper and by the last speaker.

Mr. Hewett explained, that coma came on at one time, and disappeared; that then paralysis came on, and also disappeared.

Dr. Mayo referred to a case which he had published in the *MEDICAL GAZETTE* as bearing upon the occurrence of brow ague as mentioned by Mr. Hewett. In this case the pain at first was periodic, and he thought he had been mistaken in referring it to pressure. It became worse under the use of the liquor arsenicalis. It subsequently became continuous, but was nearly removed by calomel and antimony.

On the Formation of the Buffy Coat of the Blood. By GEORGE GULLIVER, F.R.S. Surgeon in the Royal Regiment of Horse Guards. [Communicated by Robert Liston, F.R.S.]

After noticing the well-known fact that the red corpuscles will sink much faster in the entire blood, while the buffy coat is forming, than they will do in the serum alone, the author remarks, that two of the most eminent authorities on the physiology of the blood, Mr. Hewson and Dr. Davy, concluded that the rapid sinking of the corpuscles on which the buffy coat depends is due to an attenuation of the liquor sanguinis. On the contrary, Professor Hermann Nasse, and Mr. Jones, attribute the quick sinking of the corpuscles to their increased aggregation in inflammatory blood. (*British and Foreign Medical Review*, No. 28.)

Finding that the blood of the horse regularly affords a buffy surface, measuring as much perpendicularly as the lower red part of the blood-clot, the author made many experiments on the sinking of the red corpuscles in the liquor sanguinis, in the serum, and in these fluids variously altered in viscosity and specific gravity. The experiments are particularly detailed, in order that they may easily be repeated, and that no errors may arise from the different effects which Mr. Prater has shown may be produced by different quantities of the same substance.

The author is of opinion, that if we admit that the sinking of the red corpuscles affords an accurate test of the consistency of the liquor sanguinis, we must also admit the improbability that the liquor sanguinis becomes *thinner some minutes after the blood has been received in a vase*, at which time the falling of the red corpuscles is most rapid.

The author asks whether the well-known utility of saline medicines in inflammation may not be explained by their effects in preventing or destroying the aggregation of the red corpuscles, and in preventing or lessen-

ing the buffy or inflammatory condition of the blood.

The author arranges some of his conclusions as follows—

1. There is a remarkable acceleration, after a few minutes, in the rate with which the blood corpuscles sink in the liquor sanguinis.

2. The acceleration may be increased by increasing the aggregation of the corpuscles; and prevented or reversed by preventing or destroying the aggregation of the corpuscles.

3. The sinking of the corpuscles is slower in blood thinned by weak saline solutions than when mucilage is added with the salt.

4. The sinking of the corpuscles may be slower in serum artificially made thinner, and lighter than in serum artificially made thicker and heavier.

5. In the crur of horses' blood, the corpuscles are more aggregated, and with more appearance of agglutination between the corpuscles than in very buffy human blood.

6. There may be no buffy coat, or only a comparatively thin one, on the blood of the horse, when the blood has been made thinner and its coagulation retarded.

7. The corpuscles of the horse sink much quicker in his serum than the corpuscles of man do in his.

8. Increasing the proportion of corpuscles in the blood hastens coagulation, and prevents or diminishes the formation of the buffy coat more than increasing the serum only.

RECEIVED FOR REVIEW.

Practical Observations and Suggestions in Medicine. By Marshall Hall, M.D. F.R.S. Post 8vo. pp. 360.

Human Magnetism; its Claims to Dispassionate Inquiry: being an attempt to show the Utility of its application for the Relief of Human Suffering. By W. Newnham, Esq. M.R.S.L. Post 8vo. pp. 432.

A Treatise on Corns, Bunions, the Diseases of Nails, and the general Management of the Feet. By L. Durlacher, Surgeon-Chiroprapist (by special appointment) to the Queen. 8vo. pp. 196.

Elements of Physics. By C. F. Peschel, Principal of the Royal Military College at Dresden, &c. From the German, with Notes, by E. West. Illustrated with Diagrams and Woodcuts. 12mo. pp. 307.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

List of Gentlemen admitted Members, Feb. 11.—G. Cream.—H. Heginbotham.—G. Havers.—C. E. Pratt.—G. Hansbrow.—J. Hayward.—H. Campbell.—T. Underhill.—H. J. Greenough.—J. A. Magrath.—G. M. Harrison.—T. J. Ashton.

APOTHECARIES' HALL.

Gentlemen who have obtained Certificates, Feb. 13.—Philip Jolin, London.—Samuel Probyn, Ponty Pool.—Howel Morgan, Devynnock, Breconshire, S. Wales.—Francis Parker Hoblyn, Falmouth.—Richard Clarke, Beccles.—Frederick William Marshall, Horsforth, Leeds.

MORTALITY OF THE METROPOLIS.

Deaths from all causes registered in the week ending Saturday, Feb. 8.

ALL CAUSES	1018
SPECIFIED CAUSES	1015
I.—Zymotic (Epidemic, Endemic, and Contagious) Diseases, 188; among which, of—	
Small Pox	33
Measles	27
Scarlatina	34
Whooping Cough	35
Croup	11
Thrush	6
Diarrhoea	5
Dysentery	3
Cholera	0
Influenza	1
Typhus	24
II.—Dropsy, Cancer, and other Diseases of uncertain or variable Seat 110; among which, of—	
Inflammation	0
Dropsy	31
Scrophula	1
Cancer	14
Atrophy	13
Debility	19
Sudden Deaths	23
III.—Diseases of the Brain, Spinal Marrow, Nerves, and Senses, 153; among which, of—	
Hydrocephalus	29
Apoplexy	20
Paralysis	28
Convulsions	48
Insanity	1
Delirium Tremens	1
IV.—Diseases of the Lungs, and of the other Organs of Respiration, 336; among which, of—	
Pneumonia	84
Hydrothorax	6
Asthma	34
Phthisis or Consumption	154
Diseases of the Lungs, &c.	15
V.—Diseases of Heart and Blood-vessels	
VI.—Diseases of the Stomach, Liver, and other Organs of Digestion, 73; among which, of—	
Teething	15
Gastritis	2
Enteritis	19
Tubercles	10
Hernia	1
Disease of Stomach, &c.	6
Disease of Liver, &c.	11
VII.—Diseases of the Kidneys, &c.	5
VIII.—Childbirth, Diseases of the Uterus, &c. 8; among which, of—	
Childbirth	7
Disease of Uterus	0
IX.—Rheumatism, Diseases of the Bones, Joints, &c.	
X.—Diseases of Skin, Cellular Tissue, &c.	0
XI.—Old Age	70
XII.—Violence, Privation, Cold, and Intemperance	33

THE LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

FRIDAY, FEBRUARY 23, 1845.

CLINICAL LECTURE

ON

DISEASES OF THE SPINE.

By SAMUEL SOLLY, F.R.S.

Senior Assistant-Surgeon to St. Thomas's Hospital.

GENTLEMEN,—We must on this occasion return to the subject of rheumatic caries of the spine. I concluded my last lecture with the relation of a case which illustrates, in the most striking manner, the gradual and serious progress of this disease, and the obscurity of its symptoms in the early stages of it. To-day I shall relate a case in which the symptoms were more clearly developed in the first instance, and in which the progress of the disease has been arrested by prompt and decided measures.

Dec. 1842.—E. F., aged 37, fair complexion, slightly inclined to strumous diathesis; six feet in height, well-formed broad chest; great muscular power in lifting heavy weights; very temperate, and active habits; able to endure fatigue; not particularly robust, but seldom ill. Has lately suffered from occasional feelings of rheumatism in his joints, so that, on first moving them in the morning, they have felt stiff, and as if the surfaces grated upon one another: when suffering from dyspepsia, all his rheumatic feelings were aggravated. At the beginning of 1843 he first began to feel pain in his back, especially when leaning against a chair, and all chairs felt equally uncomfortable; but to this he attached no importance, believing the pain to be under the angle of the scapula, until his spine was examined, when he recognized the pain he experienced from tapping it as the same he had felt so long. He had a sensation of tightness round the chest, as if girt in by a belt. During this time he was a good deal harassed by business, driving and walking

about for many hours together. He gradually began to find that he could not walk so far or so fast, or so upright, as he used; and this inability increased upon him. He experienced a sensation of weariness in his legs, which he could not attribute to ordinary fatigue; it annoyed him a good deal, as he was fond of walking, jumping, &c. By degrees he found that he could not turn in bed without pain, and this increased in severity. His heart's action became irregular and intermittent. But all these symptoms he was disposed to attribute to dyspepsia, and the effect of anxiety in his business: at this time his bowels and liver acted naturally, but his appetite was uncertain and capricious.

About the middle of December, 1843, all these symptoms increased so much, and he became so irritable and nervous, that he came up to town and consulted me regarding them. From his statement I felt very little doubt as to their spinal origin. On stripping him I found no irregularity of these bones; but on tapping the spine downwards, as soon as I came to the third dorsal he cried out; the fourth and the fifth were also tender. He said that it was not acute pain that he experienced from the examination, but a horrible sickening feeling, which lasted more or less for a quarter of an hour afterwards.

From my house he proceeded, by my advice, to Sir Benjamin Brodie, who, after a careful examination, confirmed my diagnosis that it was a case of rheumatic caries.

I now insisted upon his lying down, without interruption, for at least two months; and although this, at the time, appeared to him to be a sacrifice of all his professional prospects, nevertheless, feeling that he required rest, he complied with the directions, and ordered a double-inclined couch for the purpose. For two days he kept the recumbent posture on an ordinary bed, but he was wretched, and he said that no words could express the relief he experienced on

being removed to his couch. On the ordinary bed he could scarcely place himself in any position in which his back was free from uneasiness or pain.

On the 24th of December, he commenced a course of mercury, by taking one grain of calomel three times a day, and six leeches to the region of the 3d, 4th, and 5th dorsal. From these he experienced relief, but they made him feel so weak, that for some days he could not raise himself in bed without fainting. He continued the same dose of mercury for three weeks, when his mouth became gently affected, and we now reduced it to a grain every night. At the end of six weeks he was able to turn on his couch without pain, and at the end of eleven weeks he was so well that I allowed him to leave his couch, but he could not sit up without fainting. I therefore ordered for him a spinal support, made by Mr. Bigg, of Leicester Square. This has proved so useful to him, that he has never experienced any feeling of syncope since its application, and he has continued to wear it with the greatest comfort ever since. He now took the iodide of potassium in two grain doses, with sarsaparilla, and in a very short time was again able to resume his professional duties, and which he has continued to perform with perfect ease and comfort to himself, with every feeling of health; and up to this time he has had no return of his ailments.

I think you will agree with me in regarding the three cases I have just related as pregnant with matter for serious reflection. The first point that I think must strike you is the length of period for which this disease may exist, and its real nature remain undiscovered; also, the extent to which the cerebro-spinal system may be affected before there is any alteration in the form of the vertebral column, or any external mark indicating disease of the osseous tissue. No one who has listened to the graphic account which my friend has written of the rise and progress of his sufferings, that I gave in my last lecture, can, I think, doubt that they depended on irritation of the spinal cord. But whence the exciting—the proximate cause of this irritation? In the ordinary, or strumous caries of the vertebra, I have already expressed my opinion that the subsequent paralysis is occasioned by fibrinous effusion into the canal, and not by the pressure of the overlapping bones, and so in rheumatic caries I have no doubt absorption of the bone, which ultimately demonstrates itself by the angular curvature, is preceded by inflammation of its substance. And, therefore, so soon as the inflammation of the bone has extended to the membranes of the cord, so soon do we have evidence of spinal irritation. If this view of the case be correct, it has a most important bearing on

our early treatment of this disease. Without troubling you with a detail of other cases of a similar character, those we have before us afford strong evidence of the truth of this view of its pathology. A. B. was always relieved, in the early stage of his disorder, by local depletion, and the disorder was evidently for the time arrested in its progress, though not altogether annihilated, as, its nature not being understood, the whole plan of treatment was vacillating and empirical. In Cripps' case, as soon as his system was affected by mercury, so soon did his paralytic symptoms subside. And in the last case, the same result followed the use of the same antiphlogistic remedies.

In treating this disorder as inflammatory, let me beseech you to remember, what I have so often dwelt upon in regard to the treatment of all affections of the nervous centres, namely, the general depression of the vital powers which attends an inflammation of their structure. It will scarcely ever bear active treatment, and the bloodletting should be almost invariably merely local. Indeed, all antiphlogistic treatment must be employed with great caution. Now, if the first case, that of A. B., exhibits the evils which ensue from a man pursuing his occupation, and following his profession, in spite of all his suffering, so does the third case demonstrate the value of perfect rest, with efficient antiphlogistic treatment, in staying the progress of this formidable disease.

I need hardly insist on the importance of a correct diagnosis and prognosis in these cases; and if it is important for you to distinguish between lateral curvature and angular curvature, so is it even still more important that you should distinguish between ordinary or *strumous* caries of the spine, and the *rheumatic* caries of Sir B. Brodie, for I am convinced that the two diseases are essentially different, both as regards their origin, progress, and termination, and the treatment required for their cure; and again, between the latter, and disease of the chord independent of disease of the bone. Sir B. Brodie, in a lecture published in the *Lancet*, of the 30th of Dec. 1843, has remarked that rheumatic caries is always accompanied with pain; scrofulous caries, though frequently, not so invariably; and in paraplegia, from disease of the chord, independent of disease of the vertebrae, there is an entire absence of pain. The history of each case will also assist you—the presence or absence of a rheumatic or of a scrofulous diathesis—the moral history of your patient, independent of disease of the chord being generally the result of excess in venery, by persons leading sedentary lives, and engaged in continual mental exertion. But in these last cases—and I have seen several—there is

no pain on tapping the spine. But, on the other hand, there are cases of spinal disease in which the diagnosis is not so easy. The patient suffers severe pain on pressure over the spinous processes, with total loss of power of the legs, but without any irregularity of the vertebræ, or other evidence of the existence of disease of the bones. The most anomalous symptoms, however, generally occur in females; and when we find in our examination of these cases that there is no evidence of a rheumatic tendency previously, that they have never suffered from rheumatic pains, and that the tenderness on pressure is not confined definitively to any particular portion of the spine, severe pressure not inflicting more pain than slight; again, the pain shifting, sometimes in one portion of the spine, sometimes in another; and if, in addition to this, you find clear signs of an hysterical diathesis, you may generally refer such ailments to an hysterical origin. This term, however, is liable to mislead; hysterical complaints are often set down as altogether imaginary, but such is not the case, they are often most serious to the patient, and most harassing and difficult to the practitioner.

There are cases on record in which females have been confined to their couch for years with most of the signs of spinal disease, and who have suddenly recovered the use of their limbs, and lost all pain in their back, under the excitement of some strong mental impression; such as the fear of fire having broken out in their house, &c. Then, again, there are other cases in which severe pain and weakness in the vertebral column had been induced by over-exertion in young and delicate females of tall stature, and slight muscular power, at a time when they have been lowered by menorrhagia, or other debilitating causes. Not long ago, I was consulted by a lady, residing in a healthy situation in Surrey, who is now 30 years of age, and has been more or less on her back for 18 years, but in whom there is no irregularity of the vertebral column whatever, or other indications of disease of the bone. She cannot bear the slightest pressure over the lumbar vertebræ, but finds relief from pressure over the dorsal and sacral vertebræ.

She first began to suffer pain in her back seventeen years ago, which she attributed to over exertion when suffering from menorrhagia. Her pain was always aggravated by a long walk, by carrying anything heavy, or any over exertion which produced fatigue; and this increased so much, that if she sat up for any length of time together, she lost the use of her limbs, but always recovered it after lying flat for a short time. After a year or two this was followed by violent spasms and cramps in her arms, by which her limbs were firmly fixed, horrible night-

mare, and a feeling as if a thick cord were tied round the chest: this spasmodic feeling was relieved by castor oil.

She gradually more and more lost the use of her limbs; at last, she could not sit up for more than fifteen or twenty minutes without experiencing a most distressing difficulty of breathing. She told me that after striving for three years against it, she found that not only could she not breathe, but that she had severe pain and anguish between her shoulders. During this time she only found relief from the very hardest mattress. She informs me that, now, the only way she can keep her back at all free from pain is by lying on a thick pad laid inside her stays; though it is very uncomfortable with it, it is absolute anguish without it, for then she can scarcely speak or move. She cannot lie in any position for more than two hours at a time, and finds relief by lying on her chest and on her right side, but never on the left. She is a sensible woman, of naturally good constitution, healthy parents, and has never exhibited any signs of hysteria. She is thin and wasted, and her digestion much impaired; she cannot digest any meat, lives principally on fish and vegetables, and farinaceous food. She is cheerful and contented. I persuaded her to try and sit up in a spinal support, similar to the one which gave so much relief in E. F.'s case, but the distress which the change of posture occasioned was frightful. She seemed almost suffocated; she described it afterwards as absolute inability to breathe, but not palpitation of the heart: this she felt subsequently.

My impression, after carefully investigating all the circumstances connected with this lady's afflictions, is, that her sufferings do not arise from any positive disease of the vertebræ; and my chief reason for this opinion is, that there is no deformity, although the disease has now lasted seventeen years, and the entire absence of rheumatic symptoms: nevertheless, the exact pathological condition is by no means clear. But its very obscurity renders the case instructive, for if it should prove to be rheumatic caries, to which in many respects it bears considerable resemblance, it will throw some light on it. If, on the other hand, it is a case of spinal irritation without actual change of structure, it shows to what an extent functional derangement may occur without disease. With regard to treatment, her extreme debility put all antiphlogistic measures, even of the mildest character, quite out of the question. You all know how much I value the cod-liver oil as a remedial agent; I was therefore much pleased when, after suggesting this with various other tonics, she told me that it was the only one that ever agreed with her.

Her general health has decidedly improved since she has been taking it.

Pathology of rheumatic caries.—Ever since I became acquainted with the existence of the disease which Sir Benjamin Brodie has thus designated, I have naturally revolved carefully what is the condition of the bones; are they really in a state of ulceration, as in strumous caries, or are they in a totally different condition? As I have not yet had the opportunity of examining the bones in this disease after death, all that I have to say on the subject is necessarily conjectural; and I do not wish you to receive my opinions in any other light than as a theory.

I believe that this disease is local, *mollities ossium rubra et fragilis*. I know that this view will be objected to, on the ground that *mollities ossium* is a general, not a partial disease, and that it is always fatal. In the paper which the Medico-Chirurgical Society did me the honour to publish, on the pathology of *mollities ossium*, I related two cases which occurred in the practice of Mr. Hodgson, of Birmingham, in which this disease was confined to one bone, and I have little doubt, that when the characters of this disease are better understood, we shall find it more limited than is at present supposed. It has been long known to the accoucheur that the bones of the pelvis will be alone the subject of *mollities ossium*, and also that they will again recover their natural condition. Dr. Rigby, in his excellent work entitled "A System of Midwifery," page 186, says, "*Mollities ossium* seldom attacks women who have had no children; sometimes it begins shortly after delivery, and very frequently during pregnancy, during the progress of which it continues to increase. Hence it occasionally happens that a woman has given birth to several healthy children without any unusual difficulty in her labours, and where, after this, the pelvis has gradually become so deformed from *mollities ossium* as to render delivery impossible by the natural passages." "Where the disease," continues the same author, "has ceased some time before death, and bone earth has been again deposited—shewing that the disease is arrested." Again, at p. 188 in the same work, we find: "*Mollities ossium*, to a slight extent, we believe, is not very uncommon, although cases of extreme deformity from this cause are of rare occurrence."

Dr. Davis, late Professor of Obstetric Medicine at University College, states, in his work on obstetrics, "that *mollities ossium* is in many cases an exclusive affection of the bones of the pelvis and of the inferior portions of the spinal column. A lady in the neighbourhood of the author's

residence had been the subject of severe pain in the back and loins for some months antecedently to her last pregnancy. These pains, as is usual in such cases, were referred to and treated for a rheumatic affection of the muscles of her loins. During her gestation the disorder became greatly aggravated, and she became totally helpless and bed-ridden. She eventually died. Upon examination after death, the pelvis presented the characteristic deformities of malacosteon; whilst, also, several of the lumbar vertebræ, which were imbedded in grume and pus, from ulceration and destruction of the immediately contiguous soft parts, were in a state of caries. No other parts of the skeleton of this subject than the pelvis had suffered distortion, nor could any of her cylindrical bones be discovered to have been in any degree affected by the disease." It is to be regretted that in this short description the exact appearance which the disease exhibited had not been more accurately described, but as far as it goes it tends to support my hypothesis.

In the paper which I have referred to in the Medico-Chirurgical Transactions, I have stated my opinion that *mollities ossium* is essentially an inflammatory disease, and as such ought to be treated; and if this view be correct, you will see that in this respect also it resembles this rheumatic caries.

I am very glad to be able to quote the opinion of the intelligent friend whose case I have related in his own words, in support of this hypothesis. In one of his letters he expresses the opinion "that the condition of the bone is simply that of *mollities ossium*; that *mollities ossium* is, as you have conjectured, *ab origine* inflammatory."

There is another circumstance which appears to strengthen this argument. During the progress of true *mollities ossium*, there is a deficiency of secretion of phosphate of lime into the bones, while there is an excretion of it from out of the system by the kidneys, the urine being loaded with it. In A. B.'s case the urine became phosphatic just previous to the alteration in the bone, which exhibited itself in angular curvature; and since he has been at Brighton he has passed a calculus composed of phosphate of lime, and shortly after this the urine ceased to deposit blood or phosphate of lime. The excretion of blood I believe was occasioned by the irritation of the calculus; his spinal disease was arrested. In one of his letters written at this time he says,—"you will be delighted to hear that I am a good deal improved. The hæmaturia terminated in a small calculus of the triple phosphatic character, since which there has been no news of importance from the renal districts. It is so long since I heard from my back that I am almost in hope that I shall never hear

from it again." This was written prior to the medical attendance which fatigued him so much, and threw him back again. So that it would appear that after the inflammatory stage had ceased, the natural deposit of lime into the bone was arrested, and then, but not till then, did the deformity of the spine take place, and when the abnormal excretion of this earth by the kidneys ceased, and its normal secretion by the vessels of the bone recommenced, then did his sufferings cease, and his recovery begin. In another letter A. B. makes the following ingenious suggestion: "If you consider phosphorus is required both for the brain matter and bone matter, you can get at something like a reason why nervous exhaustion should cause a diminished supply of phosphate of lime in the bones, for as the brain is more worthy than the bone, the constitution would give phosphorus for medulla first before bone."

Acting upon this suggestion, I should not hesitate to give phosphoric acid internally in this stage of the disease. It will do no harm even if it does not act specifically, for it is a good tonic, and often agrees with the digestive organs better than the sulphuric acid. You may begin with ten minims of the dilute acid in water for a dose.

I think that it must be evident to all pathologists who have examined the condition of the vertebral column after death in caries of these bones, that there are two different diseases; in the one there is a deposition of scrofulous tubercle, and the softening which exists appears to depend on this deposition; in the other the bones are red, and charged with soft grumous matter. It is true, that this form of disease is sometimes accompanied with suppuration, and so far this would appear to militate against my theory that angular curvature without suppuration is dependent on a different disease; but my object is to bring before you all the pathological facts which bear upon this subject, even though I may not be able to explain their relation to one another at present.

I was very much struck with the account of the post-mortem appearances in the following case related by Sir B. Brodie, in his work on *Diseases of the Joints**. The appearance of the bones is exactly similar to that which I have observed in true mollities ossium.

"CASE LXVI.—Edward Griffiths, 45 years of age, was admitted into St. George's Hospital, on the 15th of April, 1818, on account of an abscess which presented itself in the left groin. He said that about four months before his admission he had been seized with pain in the loins, and that the tumour in the groin had appeared about six weeks after the commencement of the pain. He was directed to remain constantly in the

horizontal position, and in a short time the tumor formed by the abscess in the groin disappeared, and another shewed itself over the os innominatum. On the 15th of May, this abscess was opened, and about forty ounces of pus were discharged. After this he gradually sunk, and died, worn out by profuse suppuration, on the 19th of August following.

On dissection it was found that the cancellous structure, and all the dorsal and lumbar vertebræ, was of a dark red colour, and softer than natural, so that they might be cut with a common scalpel, or even crushed by the pressure of the thumb and finger. The opposite surfaces of the bodies of the second and third lumbar vertebræ, and of the cartilage between them at the posterior part, were extensively destroyed by ulceration.

Anteriorly the bones and the intervertebral cartilage were entire, and the latter was in a perfectly natural state, but the bones throughout were of a dark and almost black colour. On one side of the body of the twelve dorsal vertebræ there was a small ulcerated spot, forming an opening which extended itself into a small cavity into the centre of the bone. The bone was also of a black colour, but the intervertebral cartilages connected with the other vertebræ were in a perfectly natural state.

The abscess had originated in the carious surfaces of the second and third lumbar vertebræ, and had extended itself behind the left psoas muscle, as low as the upper and anterior part of the left thigh, where it made a turn backwards on the inside of the tendon of the psoas muscle, and thus made its way to the place where it was opened on the posterior part.

The ribs were throughout unusually vascular and brittle, so that they might be broken by the slightest force. There were vomice in the lungs, and tubercles in the liver."

But I must not detain you any longer on the consideration of these views of the pathology of rheumatic caries, by which name we will continue to designate the disease, until we can shew by post-mortem evidence that the term *mollities vertebralis* may be substituted for that of caries. Time and further facts alone can shew their truth or error; resting satisfied at present, that the diagnostic marks of the disease are strong and clear, that the plan of treatment which ought to be pursued is equally so, and that if the disease is not detected in its early stages, that your prognosis must be unfavourable.

I will now conclude with some further remarks on one point in the management of these cases, to which I have scarcely sufficiently adverted.

In the treatment of all affections of the spinal chord, whether dependent on disease of

the vertebrae or not, it is especially important to bear in mind the sympathy which exists between it and the brain. The mind must be kept at rest; the mental powers must not be exerted; the mental energy must be husbanded, or the spinal chord will suffer.

The brain itself is more irritable, and less capable of enduring fatigue. I have lately seen this painfully illustrated in the person of my friend, to whom I have often referred. He had been obliged to attend an old patient of his, who came to the same watering place as he had chosen for his own health.

The case was an anxious one, and the attendance was heavy. The consequence was that he felt, to use his own words—"the full amount of nervous force very sensibly diminished, which proved itself to me by occasional giddiness, sleeplessness, and loss of flesh."

In another letter he thus vividly enumerates the various ways in which the brain is sympathetically affected in these diseases.

"1. Despondency. 2. Torpor. 3. Strange sensations; *a*, a wave breaking forwards over the forehead; *b*, a sound or flash of light within the calvarium; *c*, spectral illusions—exceedingly vivid; *d*, tolling of bells in the ears; *e*, occipital pains. 4. Throbbing in the head—clappings. 5. Sleep disturbed; *a*, fearful dreams.

"To live in terror of those fearful dreams
That shakes us nightly—
—better be with the dead
Than in the torture of the mind to lie
In restless ecstasy." MACBETH.

b. Unrefreshing repose—morning weariness; *c*, broken by sensations of fire or falling.

Indeed, Shakspeare must have thought of *me* beforehand, when he penned this:—

"Oh! I have past such miserable nights,
So full of ugly sights, of ghastly dreams,
That, as I am a Christian faithful man,
I would not spend another such a night,
Tho' 'twere to buy a world of happy days:
So full of dismal terror was the time."

RICHARD III.

THE PERIODICAL MATURATION AND EXTRUSION OF OVA, INDEPENDENTLY OF COITUS, IN MAMMALIA AND MAN,

PROVED TO BE

THE

PRIMARY CONDITION TO THEIR PROPAGATION.

By TH. L. W. BISCHOFF,

Professor of Medicine, and Director of the Physiological Institute at Giessen, &c. &c.

Translated by

HENRY SMITH, Esq. F.R.C.S. &c.

[Continued from p. 506.]

THE following are my own observations in reference to this part of my

subject (*viz.* that the ova quit the ovary and enter the fallopian tube, when the act of coition is not effected at all):—

At four o'clock in the afternoon of the 7th December, 1843, I obtained a lamb, which had presented signs of being "at heat" about an hour previous, but which had not received the male. The animal was forthwith shut up alone. The following morning I admitted the male to it; he several times shewed a disposition to effect the act of coition, but was prevented. Since, according to Kuhlemann (*l. c.* p. 13, note), sheep remain "at heat" during twenty-four hours only; since Kuhlemann and Hausmann profess to have seen the Graafian vesicle open twelve hours after coitus, and Von Baer has observed the ovum of the sheep in the fallopian tube before the end of the first day afterwards; I thence concluded that the ovum would quit the ovary during the first twenty-four hours of the period of "the heat," and therefore had the animal killed between three and four o'clock in the afternoon.

The same afternoon I observed, to my great satisfaction, that a Graafian vesicle on the right ovary had burst. The spot did not project upon the surface of the ovary, but attracted observation by a delicate lively red circle of vessels around a small opening, an appearance already familiar enough to me in dogs and rabbits; but one which may be easily, and certainly has been very often, overlooked by such as are not experienced in similar investigations. The diameter of this small opening was about $\frac{2}{3}$ P. line, = $\frac{9}{100}$ millim. I then searched throughout the vagina and the entire uterus most closely for spermatozoa, in order to gain the additional negative certainty that no act of coition had taken place; naturally enough, however, I could not find a trace of them, since it had been rendered absolutely impossible.

On the following morning I searched for the ovum. I laid the fallopian tube upon a plate of glass, spread out the fimbriae of its infundibulum carefully, and examined them first with the simple microscope. I found nothing there, but remarked a thread of mucus (*schleimfaden*) gradually extending itself into the infundibulum, the particles of which, when viewed under the microscope, seemed to me to have a great resemblance to thrust-off cells of the membrana granulosa of the Graafian

vesicle. I then cut open the first third of the tube with a pair of fine scissors, separated the margins, and examined every little fold carefully with a magnifying glass, and the assistance of a fine needle. I was so fortunate as to find the ovum in that part of the tube, at a distance of 5 P. lines, = $11\frac{1}{2}$ millim., from its entrance. I consider this as an extremely lucky occurrence, notwithstanding my acquaintance with the object; for the investigation is really so difficult, that one cannot wonder when nine out of ten times the search proves fruitless.

The ovum, when removed from the tube, still presented, under the microscope, altogether the appearance of an ovarian ovum. The zona was still surrounded by the cells of the discus, and although they were not extended out into fibres, yet they had perceptibly commenced to coalesce together. The diameter of the ovum with the discus was 0,0079 P. in., = $\frac{1}{11}$ P. line, = $\frac{1}{11}$ millim. The yolk completely filled the interior of the zona, in the form of a finely granulated, slightly obscure mass. After I had separated the cells of the discus from the zona with a fine needle, I found the diameter of the ovum in the zona to be 0,0054 P. in., = $\frac{1}{15}$ P. line, = $\frac{1}{30}$ millim. The thickness of the zona itself was 0,0006 P. in., = $\frac{1}{150}$ P. line, = $\frac{1}{30}$ millim. I could not perceive a germinal vesicle shining through the yolk, though it is generally possible in the ovarian ovum of the sheep.

After the ovum had remained for a time in contact with an aqueous solution of albumen, with which some common salt was mixed, the following very remarkable changes were developed in it. Firstly, an endosmosis took place into the zona, whereby it was distended, and the ovum assumed a somewhat elliptical form, measuring after a time, in its larger diameter, 0,0071 P. in., = $\frac{1}{12}$ P. line, = $\frac{1}{10}$ millim., and in its smaller, 0,0060 P. in., = $\frac{1}{15}$ P. line, = $\frac{1}{30}$ millim. As a farther result of the same action, the yolk no longer filled the interior of the zona completely, but shrank away considerably from its inner surface. In the interspace between it and the zona, a small somewhat yellowish shining vesicle or granule, having a pretty strong refracting power, now became visible; it measured 0,0005 P. in., = $\frac{1}{180}$ P. line, = $\frac{1}{72}$ millim., and corresponded accu-

rately to what I have seen and described as existing in the neighbourhood of the yolk when it no longer fills out the zona, in the ova of rabbits and bitches found in the upper third of the fallopian tube. I have started the supposition that this corpusele might be the nucleus of the germinal vesicle, which had itself undergone liquefaction, and confess that I find this opinion rather strengthened by the investigation in question; for in this instance it was extremely probable that the germinal vesicle had disappeared but a very short time.

In addition to the above appearances, the yolk of this ovum, after its separation from the zona, presented the most deceptive appearance of an especial vitelline membrane that has ever presented itself to my notice. I remember, also, that several observers, Professor Bruns, for instance, state that they have seen this vitelline membrane particularly distinct, and especially in the ovum of the sheep. The yolk had a very sharp outline, which, under a certain adjustment of the microscope, appeared like a dark line, as though formed by a membrane. It seemed even as if an interspace existed between it and the granular vitelline mass. Notwithstanding, however, I remained convinced, even in this instance, that the yolk possesses no especial vitelline membrane besides the zona, but rather that it is a gelatinous or albuminous sphere, in which the vitelline granules are suspended and distributed. The fewer the latter in proportion to their connecting material, the less opaque and dark is the yolk; as is the case, for instance, in the ovum of the sheep. The surface and margin of a section of the sphere are for the most part formed of this connecting material, and give it therefore a very sharp outline, which appears to be produced by a fine transparent investment. That this is the correct explanation is proved, in the first place, by very careful observation with a good microscope; by the aid of which, and by very gently changing the focus, one can directly convince oneself of the relation of parts just now described. In the second place, by continued observation, I saw how the yolk evidently absorbed gradually the fluid which had penetrated into the zona. Here and there it swelled up to a certain extent;

the sharp outline was lost, whilst it remained at other points; so that this could not possibly have been produced by the bursting of a delicate investment. Thirdly, after I had burst the ovum by means of the compressorium, some of the separate fragments of the yolk even exhibited the same sharp margin, which could not therefore be produced by an investing membrane. Lastly, the before mentioned granule near to the yolk, proves that the latter could not possess an especial covering; for the granule must, at all events, have been previously within the yolk, although inclosed immediately upon its surface, but it was now free in the interspace between the yolk and the zona. Had the yolk possessed an investing membrane, this would have been impossible.

I attach great importance to this point, since this question respecting an especial vitelline membrane is decisive in reference to the further development of the ovum. As I must in the prosecution of this examination from time to time contradict it, I wished that others might also be strengthened or corrected in their views.

The above described observation, however, made upon a young animal, which had never been impregnated, and never been "at heat," proves altogether indubitably, and in the most complete manner, the maturation and extrusion of the ovum from the ovary, quite independently of coition.

On the 18th and 19th December, 1843, I first remarked that a large bitch which I had in my possession commenced to be "in heat." The vulva was much swollen, and the dogs followed her eagerly. On the 19th, I tried if she would receive the male. But, although she played about with him actively, she would not permit coition to take place. I then kept her closely shut up, and on the 21st admitted a dog to her again. She now seemed by her actions to be willing to receive the male: I did not, however, permit it, but separated the animals again. At ten o'clock in the morning of the 23d, I cut out the left ovary and fallopian tube, and closed the wound by suture. It proved on examination that the Graafian follicles had not yet opened; four of them, however, were much swollen, and had a diameter of 2 to $2\frac{1}{2}$ Par. lines = 4 to 5 millim. I removed them cautiously from out of

the stroma of the ovary, and placed them, as cleanly dissected as was possible upon a small plate of glass. As I opened the first, an ovulum, provided with its discus, escaped with the fluid; it had a diameter of 0.00078 P. Inch = $\frac{3}{17}$ millim. To my astonishment, this Graafian vesicle contained a second ovum, with a discus of 0.0081 P. In. = $\frac{1}{4}$ millim. in diameter. The three other vesicles also each contained an ovum of about the same size. The inner surface of the Graafian vesicle was already lined with delicate granulations, the elements of the mass forming the corpus luteum, which, as it appears to me, develop themselves from the cells of the membrana granulosa; I observed here, very distinctly, in several Graafian vesicles, the manner in which the ovula are stowed in them. The cells of the discus (namely) form a small cone, the roundish head of which receives the ovulum, with which it projects free into the cavity of the Graafian follicle, that being filled with fluid; with its basis it rests upon a point of the wall of the follicle, probably at the precise spot where the latter opens.

These ova, moreover, appeared evidently not yet fully matured for their exit. The Graafian vesicles, for instance, were not only not much thinned, but the cells of the discus were also not extended out into those fibres which denote the full maturity of the ovum. When they were removed with the aid of a needle from the zona, the ova in the latter measured 0.0060 — 0.0065 P. In. = $\frac{8}{17}$ — $\frac{1}{4}$ millim. The yolk completely filled the interior of the zona in all of them, and only in one little spot had the vitelline granules receded from it to such a degree as had the germinal vesicle. In these instances I could neither obtain an accurate sight of it so long as the ova were yet closed, nor when I had opened them with the compressorium. I think I may feel convinced from the foregoing details, that had the bitch received the male then, the spermatozoa would certainly have had time to reach the ovary before the Graafian vesicles had opened.

I did not kill the animal until five days afterwards, in order to be certain that the opening of the follicle had taken place. The very first sight of the ovary, indeed, immediately showed that it had opened. The tunica vaginalis of the ovary, formed by the peri-

toneum, contained a considerable quantity of limpid serum. Four corpora lutea were well developed in the ovary. In two of these, the mass of granulations forming them grew out a considerable distance from the previous opening in the follicle, in a manner which I have seldom seen in the dog. The opening had probably closed at an earlier period in the other two, before the mass of the corpus luteum had arrived at so considerable a growth, and they were therefore now imbedded in the stroma of the ovary.

After I had carefully dissected the fallopian tube, I extended it out upon a wax tablet, and opened it with a pair of fine scissors: I found the four extruded ova already far advanced in its cavity; they were close together at a distance of 3 P. in. = 8 centim. from the ostium abdominale. The tube itself was 5 P. in. = 13 centim. in length. Three of these ova had the usual normal round appearance; the fourth, on the contrary, had an anomalous form, such as I had often previously seen in the dog, being elliptical, or almost like the figure of a guitar. All still had their discs around the zona, yet it was clear that these cells no longer retained their full, normal appearance, but had already commenced to undergo liquefaction. The ova had somewhat increased in size, for they measured with the discus 0,0090—0,0097 P. in. in diameter. Such was not the case with the yolk, for that seemed rather to be somewhat condensed, and on that account it no longer completely filled out the zona in all the ova. It had its usual form, and no trace of a division was developed in it. In the interspace between the yolk and the zona in one ovum, that large vesicle or granule ($\frac{1}{10}$ P. in. = $\frac{1}{32}$ millim.) which, as it seems, is always observable in ova at the commencement of the tube, presented itself: I have on a former occasion pronounced it to be the nucleus of the germinal vesicle. I saw nothing of the sort in the other three ova. I no longer found any trace of the germinal vesicle itself in any of the ova.

I do not believe it to be possible to prove the entire process of the maturation and exit of the ova during "the heat," and without coition, more completely than it is done by this twofold observation instituted in one and the same animal.

On January 4, 1844, I obtained the

genital organs of a sow, which had manifested the strongest signs of "the heat" during 48 hours, but had not been admitted to any male. The Graafian vesicles, however, were still closed. A considerable number of these, indeed, were much developed in both ovaries, and were very conspicuous from the rest, in consequence of their greater vascularity; but none of them had burst, and I forthwith obtained the ovum from one which I had removed from the ovary and opened upon a glass. It was, as usual, surrounded by the cells of its discus, which, moreover, were still round, and not extended into fibres. It measured in the diameter of its zona 0,0060 P. in. The yolk, which consisted for the most part of pretty large fat globules, did not completely fill the interior of the zona. After I had removed the cells of the discus with a needle, and the ovum lay level upon the glass, its diameter had increased to 0,0068 P. in.: the yolk now filled the interior of the zona completely, and as its particles had receded somewhat from each other, a clear circular spot became apparent at one point of its circumference, and which was readily recognisable as denoting the presence of the germinal vesicle, although, being covered by the vitelline granules, its outline was not perceptible. In fact, on crushing the ovum by gentle pressure, the vesicle with its germinal spot came out free; the spot was unusually large, but did not admit of any insight into its structure even under a very high magnifying power.

Thus this animal was evidently killed too early, at a time when the phenomena of "the heat" had not yet advanced to the opening of the Graafian vesicles, and exit of the ova.

Some weeks previous, on December 4, 1843, I had examined the genital organs of another sow, which had been kept distinct from the male from its birth. The possessor of the animal assured me that on former occasions he had several times observed it to exhibit signs of "the heat," and that they had been present again at the time of its death, but he could not afford me the necessary information as to how long they had existed before death. On examining the ovaries, it appeared that fresh corpora lutea were present in both. There were eight on the right ovary. In size they were all equal to

large peas, and projected considerably forwards upon the surface of the ovary. They had a dark brownish-red colour. A small bright red coloured spot was observable upon the highest point of each of them, but a distinct opening was no longer perceptible. When, however, the tunica propria of the ovary, with its serous investment, was dissected from off the surface of one of these corpora lutea, it presented a small opening precisely corresponding to the above mentioned spot. The corpora lutea consisted of a peripheral stratum (about a Parisian line in thickness) of flesh-like granulations, just such as are always developed from the inner surface of a Graafian vesicle in its transition into a corpus luteum. This enclosed a considerable cavity filled with a dark red coagulum, which was intimately connected with the granulations. I could not discover an ovum in any one of them. On the left side were two corpora lutea presenting the same condition; near to these, two others, which were considerably larger, and had an almost transparent reddish glistening appearance. The peripheral stratum in these was much less developed than in the others. It enclosed a pellucid, reddish coagulum, and also a considerable quantity of what looked like an uncoagulated fluid, but which coagulated so soon as it was exposed to the air upon a plate of glass. This coagulum was also connected to the walls. These two last described might have been taken for Graafian vesicles which had not as yet burst, for the mass of the corpus luteum commences its development from the walls even previous to its opening—such is the case, at least, in the bitch. But, 1, the small red spot on their summits, the point of opening, 2, the extravasation of blood which had taken place into their interior, and 3, the absence of an ovulum (which, at least, I could not find) may be received as evidence that both these vesicles had also already burst; but that then (as I have also seen in bitches in which I found the ova in the fallopian tube) the opening had again closed, and a second secretion of liquor sanguinis had taken place afterwards into the evacuated vesicle, whereby it had once more become distended.

Unfortunately I did not succeed in finding the ova in the tubes, although

I searched for them carefully for several hours. But it is a task of so much difficulty, both from the considerable width and length of the tube, and the many folds which it has, that I do not consider this negative result as proving anything. Besides, it is probable, that the ova, being unfecundated, had already undergone liquefaction. The advanced development of most of the corpora lutea, as well as the fact of the uterus and vagina no longer presenting any striking degree of turgescence, seemed to indicate that "the heat" had already some time since passed over.

I saw completely developed corpora lutea in the ovaries of another sow, which had likewise never received the male, and which had been observed to be "at heat" fourteen days previously, but I felt that it would be to no purpose to search for the ova.

Soon after, however, I obtained the genital organs of a young sow which had never been with young, and which I knew for certain had been shut up alone for the previous thirteen days. The first traces of "the heat" appeared five days before, and after that they had commenced to pass off, the animal was killed (on the morning of the fifth day.) It was evident, at the first glance of the ovary, that the ova were already extruded, for seven recent corpora lutea were developed on one of them, and on the other, six. There was no longer any opening perceptible in them, nor did they any longer contain large cavities filled with blood or serous fluid, but the Graafian vesicles were already filled up by granulations of the usual character. The point of rupture, however, was still distinctly recognizable from its deep redness. I proceeded at once to make an accurate investigation of the fallopian tube, which was about 11 Paris inches in length, and very full of folds, particularly in the first half of its length. By removing the epithelium cautiously in small portions, and examining them with a simple microscope, I succeeded in finding ten ova in the lower portion of the tube, at about from two to four inches from the ostium uterinum, and at some distance from each other. When examined with the microscope, they bore a general resemblance to an ovarian ovum when deprived of its discus proligerus. They had a diameter of from 0,0064 to 0,0068 Paris

in. (about equal to $\frac{1}{15}$ Paris line, or $\frac{1}{8}$ millim.) There was no trace of albumen developed around the zona, but the latter formed the sole investment of the ovum, and had in most instances a thickness of 0,0005 Paris inch, $=\frac{1}{7}$ Paris line, $=\frac{1}{8}$ millim. The yolk did not completely fill the interior of the zona in most of the ova, and varied in its diameter from 0,0040 to 0,0054 Paris in. $=\frac{1}{20}$ to $\frac{1}{15}$ Paris line, or $\frac{1}{10}$ to $\frac{1}{30}$ millim. Its composition exhibited those larger fat vesicles which also distinguish the ovarian ovum of the sow; they were, however, in most of the ova, so unequally distributed through the vitelline mass, as to give it an irregularly spotted appearance. The outline of the yolk was in this instance again so sharp, particularly in a certain adjustment of the microscope, that the existence of an especial vitelline membrane might have been assumed (as has, indeed, been the case with Dr. Meyer in reference to the ovum of the sow); but the same circumstances which I have already mentioned above in reference to the ovum of the sheep, here again afforded complete proof that such was really not present. I could no longer discover anything of the germinal vesicle; here, again, however, there was in some of the ova a very pale granule between the yolk and zona, which, as I have before stated, might correspond to the nucleus of the germinal vesicle, the germinal spot.

These three observations, then, upon the sow, furnish, so far as regards that animal, the most complete proof of the law laid down by me.

[To be continued.]

OBSERVATIONS
ON THE
NATURE AND TREATMENT OF THE
MORE IMPORTANT DISEASES
OF THE NERVOUS SYSTEM:

With Illustrative Cases.

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[Continued from page 675.]

The treatment of Hydrocephalus.—A review of many cases shows that the fatal event was owing to early neglect, after the symptoms of an oppressed brain

had shown themselves; if the first week has passed without proper remedies, the case is often hopeless.

That the treatment should be actively antiphlogistic in the early stage, is generally admitted; but the records of cases show that leeches are sometimes trusted to, when a general bleeding ought to have been employed. Every practitioner of much experience will have had reason to regret that he had not bled more largely in the early period of this disease. I have bled a child eighteen months old, from the back of the hand, where alone a vein could be found, to an ounce and a half, with the best effect; and have seen stupor and obstinate febrile symptoms instantly relieved by a single bleeding from the jugular vein, when the most active medicines had been given in vain. Bleeding from an artery in children seems to be injuriously infrequent.

Next in value to bleeding, is the cold affusion; or a long-continued stream of cold water on the head, or applying a cooling lotion with a large paint-brush, which is preferable to laying a wet sponge or cold cloths on the head, the refrigerating effect being certainly greater. A spirituous lotion is not always so safe as plain vinegar and water; for alcohol in the lotion has seemed to excite delirium.

Of sedatives, the colchicum is far preferable to digitalis: many cases show that mischief has been done by an administration of the latter drug such as would not generally be thought incautious; it has induced symptoms that falsely appeared to be the effects of serous effusion from the natural progress of the disease. The tincture of foxglove should never be given to young children, nor to older subjects of a weak habit, after chronic disease in other parts of the system. In cases, beyond the age of infancy, when there is much delirium with a small tense pulse, narcotics have been given; they are safe and often highly useful, after proper bleeding; but at the beginning of the disease, or during the height of the inflammation, they are decidedly hurtful; and even the favourite combination of opium with calomel is, I believe, often unadvisable: antimony with a purgative, and the steady affusion of cool water, are the best means of improving a hard quick

sharp pulse in children, when bleeding cannot be carried farther.

In the latter stages of the disease, when much mercury has been given, and the system is irritable, henbane or muriate of morphia is safe and beneficial; but when opium has been given, having appeared to be required by the intermittent headache, its effect has been a matter for regret.

The extensive pustulation of the scalp by antimonial ointment has appeared a powerful means of lessening the stupor: but its irritant action has induced delirium.

Mercury, employed so as to affect the system, without previous bleeding, has not been successful. The use of it by inunction, with small doses of calomel, has been more satisfactory than the enormous quantities of the latter which are sometimes given.

Costiveness being a predominant symptom, violent doses of drastic purgatives are sometimes given, with an unsatisfactory effect: the repetition of small doses of calomel and gamboge, or calomel dropped on castor oil, with a senna clyster, and the cold affusion on the spine, are better means of acting on the bowels.

The severity of the vomiting has led to an attempt to stop it by mineral acids, or by the hydrocyanic, not always with a desirable effect: the vomiting is a useful criterion of the state of the brain, and has seemed to relieve the inflammatory tension of the vascular system. If it is thought right to stop it, ether on the epigastrium I have found safe and efficacious.

The spasms in the latter stage of the disease are relieved by giving a little spirit of ammonia, and an opiate, applying at the same time on the spine a cloth wetted with tepid vinegar; or by dropping elder-flower water on the head, and administering a turpentine clyster.

For the depression of the circulation, that sometimes attends the outset of the disease, the cold affusion on the head, and a stimulant pediluvium, are the best cordials. A state of exhaustion also sometimes occurs in the progress of the malady, and death is threatened by a sinking of the vital powers: in one such instance, in a boy seven years of age, I gave half a pint of sherry in a few hours, with success! In such a state, of course, the cordial should be

given in very small doses, repeated at short intervals.

In a case where unequivocal symptoms of effusion seemed to forbid a hope of recovery, the child was restored by a combination of purgatives, mercurials, counter-irritants, and narcotics, in the course of two months.

CASE XXVI.—A child, $2\frac{1}{2}$ years old, in April 1821, appeared heavy in the head, and had restless nights; the symptoms were thought to be from dentition, from which it had generally suffered. About the middle of May it seemed worse, and on the 25th it became affected with urgent vomiting, costiveness, fever, and a tendency to stupor, with intolerance of light. On the 31st the vomiting and lethargy continued.

Purgative clysters, calomel and scammony.

The next day, being weak and low from purging, a little wine was given. This was followed by an increase of coma for the next four days, when fatal convulsions ensued.

Inspection.—The membranes of the brain adhering; fibrine on the arachnoid over the hemispheres; the brain very soft; serum in the ventricles, the floors of which were very thin, as if from absorption; scrofulous tumors in the optic thalami, and in the cortical matter of the cerebellum.

CASE XXVII.—A young infant, in September 1821, had shivering, screaming, and fever, succeeded in a few days by occasional convulsions; these symptoms continued for a fortnight, and were then accompanied by vomiting and costiveness alternating with diarrhoea, flushing of the face, swelling of the head, and spasms of the limbs. It was not apparently teething, and could suck well.

Leeches, calomel and magnesia.

On the 4th day of the more acute disease, spasms of the eye-balls, and stupor, were superadded; the pulse strong.

Leeches, a blister, calomel and purgatives.

The next day, more decided convulsions; the vital powers low.

Mercury, a warm bath, and a little wine.

The 6th day, heat of the head, and coma, which was relieved after the cold affusion.

Leeches, mercury and cold, repeated.

Thenslightconvulsionsandvomiting.

A blister on the head.

On the 10th day, apparent blindness, and the pulse irregular: wine-why given; and its use was followed by a return of vomiting and fever.

A blister and purgatives.

At the 14th day an extraordinary amendment; the natural and vital functions good, the sight restored, and the breast taken. In a few days more, however, about the middle of the fifth week from the first attack of illness, the vital powers sunk, and death ensued without convulsions.

Inspection.—The sutures firm: six ounces of serum in the ventricles; much thickening of the membrane; pus at the inferior part of the cerebellum, and an appearance of ulceration at its base.

CASE XXVIII.—A girl, aged 15, was affected at the end of March 1822, with symptoms of enteritis, which were relieved by the usual treatment in ten days. She then complained of headache for about a similar period, and used leeches with only temporary relief. On the 10th day of the head affection the symptoms were, slight pain in the belly, severe pain at the forehead, vomiting, which was always increased by the erect posture, costiveness, thirst, and dysury; the tongue white, the pulse low and irregular.

Bleeding to twelve ounces, the blood natural; the head shaven; calomel and scammony every four hours; and a purgative clyster.

The next day, little change, except that the pulse was more regular.

Ten leeches to the head, tepid sponging, an opiate clyster, and calomel.

The 12th day, the vomiting, which was checked by the clyster, returned; some hard stools passed; severe headache, followed by delirium; pulse 80, irregular.

Calomel and the clyster repeated, and leeches to the head.

The 13th day, headache and delirium severe; bleeding to eighteen ounces, followed by relief; then vomiting, and the pulse 126, and variable.

Purgatives, leeches, and a blister on the head, and calomel.

The 14th day, free purging, without relief of headache, or delirium; then a

little relief on eight leeches bleeding; the aspect typhoid; pulse 150, but after several more natural stools it fell to 120; the heat of the body by the thermometer 103°; the pupils fixed and dilated.

Mercurial purgatives, and cold to the head.

The next day, the pulse again 150; a squint and fits of screaming, with a tendency to coma, and involuntary stools. The 16th day, much delirium; pulse 160: 17th day, pulse 204, coma and death.

Inspection.—The dura mater vascular; serum betwixt the membranes at the base of the skull; the brain very firm; its arteries much enlarged; much serum in the ventricles. The small intestines vascular in the peritoneal coat; the mucous coat also vascular in spots, and abraded; the mesenteric glands enlarged and vascular.

CASE XXIX.—A boy, 6 years of age, at the beginning of December 1827, complained of pain in the head, and loss of appetite, and seemed to be wasting, but continued to go to school. At the end of ten days he was affected with vomiting, pain in the bowels and diarrhoea, and voided some worms. On the 14th, febrile symptoms, cough and pain in the side, in addition to the former symptoms.

Calomel and antimony, salines and digitals.

15th.—More headache and fever. the diarrhoea stopped, vomiting continued.

Leeches and purgatives.

In the next three days a remission of all the symptoms, except the vomiting, and he sat up; but in the evening of the 16th, acute pain in the head returned, with delirium, sleeplessness, vomiting and diarrhoea, but with little fever.

Leeches, and calomel with opium in small doses.

In the next evening, severe delirium and screaming alternating with stupor.

20th.—Still more stupor, and costiveness, the pulse slow and irregular, the skin cold. Three doses only of the calomel had been given, and the leeches which had been ordered three times had bled very little.

A blister on the head, the warm bath, sinapisms to the feet, scammony and calomel in repeated doses.

21st.—Less stupor and screaming.

In the evening, the vital powers low; costiveness, which had persisted for two days; pupils dilated.

A blister to the neck, a purgative clyster.

22d.—Copious stools from the clyster, calm sleep, the general circulation improved, but the pulse very irregular.

Mercurial antimonial ointment on the head, clysters, calomel and scammony.

23d.—The bowels purged, pulse more regular, more natural warmth, and a power of swallowing. In the evening, more stupor.

24th.—The vital powers sinking.

25th.—The pulse regular, stupor lessened; but the face flushed, and an occasional convulsive tremor; the pupils dilated. Death the next day, one week from the severe relapse, and from the first considerable disturbance of the pulse; a fortnight from his discontinuing to go to school.

Inspection.—The dura mater extremely vascular; the arachnoid opaque at the vertex and base of the brain; the pia mater extremely vascular, and coated with fibrine. Four ounces of serum in the ventricles; the substance of the brain condensed and vascular; the membranes of the upper part of the spinal chord also very vascular.

CASE XXX.—A puny boy, 4 years old, complained, about January 7th, 1830, of shivering and pain at the head, but not severe: pain also in the hypochondria, attended with costiveness, and followed in a week by delirium.

22d.—The case appeared to be chiefly pleuritic, for which the attendant ordered leeches to the side, and calomel, antimony, and scammony, with relief.

24th.—A slight cough remaining; a return of delirium with a comatose tendency, and an aspect of exhaustion.

The medicines repeated, and squills.

26th.—Delirium continuing, and slight convulsions; little fever; the bowels purged.

A blister and aperients.

27th.—The symptoms relieved. In the next two days, a return of convulsions.

Purgatives.

30th.—The vital powers low, the eyes vascular, the pupils not dilated, the head hot, bowels costive.

February 1st.—Spasm of the eye-

balls, and death in the fourth week of the illness.

Inspection.—The skull large and vascular; the dura mater and the membranes of the brain excessively vascular; fibrine on the arachnoid at the pons varolii; the brain large and condensed; the four ventricles formed one large cavity, filled with six ounces of serum. The arteries at the base of the brain enlarged and flaccid; serum in the vertebral canal. More intense appearances of membranous inflammation could not be exhibited.

CASE XXXI.—A fine girl, 5 years of age, about the 15th of May, 1830, was affected with pain at the head, feverishness, vomiting and costiveness: which continued more or less for a fortnight, without recourse to remedies—despair having paralysed the attendants, another of the family having died with similar symptoms.

15th.—Spasms of the limbs, stupor and moaning; the vomiting had subsided; the head hot, pulse regular; little fever.

The head shaven, leeches and cold to the head, a stimulant foot-bath, calomel with scammony in repeated doses; clysters; salines with colchicum and antimony.

On the next day, more sense, so as to complain of pain in the bowels; some squint, the eyes not suffused, but the pupils dilated; no fever; the bowels purged of fetid stools.

The medicines repeated, and mercurial antimonial ointment on the head.

21st.—The brain still oppressed; the pupils more dilated; the pulse regular, and not quick.

22d.—Vision gone, coma increasing.

23d.—In the same state.

24th.—The pulse quick, respiration regular; the power of hearing and of deglutition remaining, the limbs affected with spasms.

Clysters and tepid sponging.

25th.—Restlessness soothed; coma increasing.

26th.—Tranquil death.

Inspection.—The sinuses of the dura mater very much loaded with blood; the arachnoid very opaque and thickened; the pia mater very vascular and florid; five ounces of serum in the ventricles; their walls vascular and much softened, as was the optic thalami

and corpora striata; the brain's substance generally very vascular. The medulla oblongata much softened, and, as well as the optic nerves, coated thickly with fibrine. The arterious circle of Willis very large. Probably this case is not surpassed, in the peculiarity of its symptoms, and in the character of the morbid appearances.

CASE XXXII.—A fine boy, of a very precocious mind, was seized in his 5th year, while travelling, with acute pain in the head and vomiting, followed by constipation: a blister and purgatives were employed, and local bleeding omitted, the attention of his medical adviser being chiefly directed to the bowels, on the supposition that the head symptoms might proceed from worms. The usual symptoms of effusion in the brain followed, with convulsions and paraplegia; the sutures of the skull, which had been firmly united, gave way, and became widely separated: after this the stupor and convulsions abated, and his superior mental faculties remained, but when I saw him he was blind and palsied. Life was prolonged in this state for eighteen months. The cold affusion was the only thing that seemed to alleviate the symptoms.

Successful Cases.

CASE XXXIII.—A child, 3 years of age, on February 14th, 1830, had been lethargic, and costive for a week; then was affected with "fits," and tossing of the head, and about March 14th showed a tendency to stupor, but could at times notice objects; its arms were in perpetual motion, yet not altogether spasmodic; the pupils dilated; much emaciation; no fever.

Mercurial-antimonial ointment, calomel, magnesia, and henbane.

17th.—Quieter from the medicine.

20th.—Spasms subsided; more sense, but vital functions low; salivated by the mercury.

23d.—Exhaustion and costiveness.

Aperients.

24th.—Fits of screaming for two hours together, but no spasms; pupils dilated; eyes staring; sleeplessness, the head seemingly enlarged.

Calomel, Pulv. Ipecac. cum. Opio; Aperients.

31st.—The head much enlarged; eyeballs rolling much when asleep.

April 3d.—Sleepless and costive.

Calomel, castor-oil, and acetate of morphia.

Progressive amendment to the 16th, when it was convalescent; and in May it was continuing well.

In the last month of treatment, the child used of calomel a scruple, ung. hydrarg. fort. a drachm, croton-oil 12 drops, scammony a drachm, rhubarb a drachm and a half, magnesia a drachm, Epsom salts an ounce and a half, Dover's powder a scruple, acetate of morphia a grain, tincture of henbane two drachms.

CASE XXXIV.—A very fine boy, aged 7, at the end of April 1830, was affected with cough, and symptoms of encephalitis, for which leeches, with calomel and antimony, were used; but the symptoms persisting in the next three days, he was bled, on May 2d, to five ounces, which induced syncope; the blood was very sily.

Head shaved, leeches repeated, antimonial ointment, purgatives, salines, with colchicum.

The next day, some antimony excited severe vomiting.

4th.—The head relieved; cough remaining; pulse low.

A blister on the breast; salines.

6th.—Restlessness and much pain in the forehead; pulse low; scalp sore from the ointment. In the two following days, a similar state.

On the 9th, the vital powers extremely low, but he was sensible.

Stimulant fomentations. Mild food.

10th.—Cold and pulseless at the wrist; the action of the carotids also feeble; foetid stools passed.

Hot alcoholic fomentations; quinine and sherry wine.

By these means, continued to the 13th, the collapse went off, but pains in the head, cough, and feverishness, returned.

Stimulants stopped; squills and acetate of ammonia given.

The next day still better, but stools foetid.

Calomel with magnesia.

16th.—Cough easier; slight headache.

Medicines repeated, and meat-broth.

Convalescence progressive from the 14th to 25th.

During the state of collapse, in five

days, four ounces of alcohol were used as an embrocation, and twelve ounces of sherry, with half a drachm of sulphate of quina taken.

[To be continued.]

TEMPORARY PROTRUSION OF THE EYEBALL,

WITH LOSS OF VISION,
FROM RHEUMATIC INFLAMMATION FOLLOWING SCARLATINA.

BY ISAAC G. PORTER, M.D.

New London.

[THE following interesting case we extract from the American Journal of the Medical Sciences.—ED. GAZ.]

Though single observations in pathology are, ordinarily, read with little interest, yet they possess no small value when they throw light upon controverted physiological principles, or newly-discovered points in anatomy.

In the Dublin Journal for July 1841, is a highly interesting article, by J. M. Ferrall, Esq., exhibiting his views respecting the anatomy of certain structures in the orbit of the eye, and the pathology thence deduced. The benefit of these new views was not enjoyed by the writer while the following case was in progress, as they were not published in this country until nearly a year after its occurrence; but in no way, except by their adoption, can its peculiarities be explained. Granting the anatomy to be as maintained by him and others, and the difficulty is easily solved on common pathological principles.

Early in October 1841, a daughter of P. S—, six years of age, was attacked with scarlatina, then sporadically prevalent. The efflorescence was but slight, and the soreness and redness of the fauces transient, and of so little account, that medical advice was not then sought. No unusual exposure, or error in diet, could certainly be regarded as the occasion of what followed, though from the slight illness of the child, both may have occurred without the knowledge of her parents. Ten days, however, from the appearance of the rash, there were slight febrile indications, followed by symptoms of jaundice, the skin and albumina being discoloured, urine red and

sparing, fæces ash-coloured. This continued about a week, and, doubtless, arose from gastro-duodenal inflammation; and as it subsided marks of irritation in other portions of the intestinal canal were evidenced by fever, picking the nose, grinding the teeth, discoloured and offensive dejections, with other indications of infantile remittent fever. Profuse diarrhœa followed, and, as this yielded, severe rheumatic pains attacked the extremities. These made their appearance about two weeks after the rash, and were thenceforth intermingled with other symptoms, affecting sometimes the wrists and arms, and then migrating to the ankles—the part affected being so tender and painful as to forbid all pressure or motion. Moderate swelling was the only external sign of inflammation. The treatment, thus far, consisted in meeting symptoms as they arose. The jaundice yielded to counter-irritants and fomentations over the stomach and liver, with calomel, pulv. ipecac. comp., and laxative enemata.

The diarrhœa, as in other cases following scarlatina, was speedily checked by one or two mild cathartic doses of pulv. rhei, two parts, and hydrarg. chlor. mit. one part. The rheumatic pains were alleviated by anodyne fomentations and sinapisms, and pulv. ipecac. comp.

One month from the appearance of the rash, these pains, which had continued for a fortnight, began to diminish, when the right eye became swollen and painful. At first it was supposed to be confined to the lid, but it was soon evident that other structures were affected. The eye soon protruded one-half or three-fourths of an inch, giving a hideous aspect to the countenance, and was very hard and firm to the touch*. The lids became of a dark-red or purple colour, and so great was the projection of the eye that they were forcibly separated from each other one-fourth of an inch; the eyelashes, from the same cause, being removed far asunder. The conjunctiva assumed a peculiar aspect, lying in folds, surrounding or overhanging the cornea, as in chemosis, though "amber-coloured," being filled with serum instead of blood. The iris was scarcely

* Though not a case of hydrophthalmia, yet, from its appearance, it might justly receive one of its synonyms "buphthalmus," or ox-eye.

visible, and the cornea, so far as seen, was dull and hazy, though, owing to the encroachment of the conjunctiva, no satisfactory view of it could be obtained. The sight of the eye was probably nearly lost, yet from the age and debility of the child it was impossible to settle the point. The amount of pain did not seem very great, perhaps from her being constantly under the influence of anodynes. A sense of distension, or, perhaps, of itching, seemed almost constant in the swollen lid, and very slight friction with a brush seemed grateful, though pressure gave extreme pain. Reserving the treatment instituted for a subsequent place, we next advert to another phase of the disease. As the eye was reduced to its ordinary size, the hands and wrists became again painful, stiff, and swollen. Soon they were entirely relieved, when evident symptoms of pericarditis appeared. The countenance became indicative of extreme distress, and there were severe darting pains in the region of the heart, with palpitation, difficult, catching respiration, with inability to lie on the left side. At times there were paroxysms of faintness and distress, resulting in profuse cold perspirations. Occasionally there was febrile action, but the pulse was so weak as to forbid bleeding. A blister was applied to the region of the heart, and, under the administration of calomel, opium, and colchicum, the disease soon left her, since which time, after recovering her strength, she has enjoyed her usual health.

Was this true rheumatism, or only "an analogous affection," which follows scarlatina? Watson (*Principles and Practice of Physic*, p. 882), whose opinion is entitled to great respect, is inclined to believe that it is not genuine rheumatism; for he says, "I have noticed the painful joints were eased and benefited by friction, a circumstance which may help to distinguish this affection from true rheumatism. Another distinctive circumstance is, that although all these patients were children, the heart in no case became implicated with the tumid joints." The validity of this latter argument, the present case, with its strong cardiac symptoms, must destroy. That pericarditis may not occur after scarlatina unconnected with rheumatism, we will not affirm, or even that there might not

be a like occurrence while the joints were, or had recently been, swollen with that disease; yet in such connection, as a general principle, the old law maxim, "*noscitur a sociis*," will be of safe application. It may be of little importance whether this affection be or be not regarded as genuine rheumatism, yet, could the true pathology be ascertained, it might greatly influence our practice. As is true in that disease, so these pains are migratory, while their situation in the fibrous tissue, the aspect of the part, and the constitutional symptoms, are all likewise similar. The effect of remedies is also the same in both—colchicum, mercury, and opiates, proving in each equally serviceable. Is it not possible that, from the peculiar irritability of the system after scarlatina, the ordinary causes of rheumatism, acting in a slight degree, may be adequate to the production of the effects in question? and that, were the methods of cure, in severe cases, more decisive (in mild cases only the mildest means should be used), consisting of such articles as were used above, rather than in external applications, so apt in rheumatism to render it metastatic, yet, which are chiefly recommended by those who have alluded to the affections, as following scarlatina, it would be less likely to prove wandering, and thus dangerous?

That the affection may safely and properly be regarded as true rheumatism, we would also argue from that most interesting feature of the foregoing case, the protrusion of the eye; there having been, from our first attendance, a scanty secretion of thick and bloody urine, though symptoms of anasarca were never very prominent, yet when the swelling of the eye commenced it was referred to an œdematous state of the lids; but as it increased the impression became predominant that it was hydrophthalmia, and was so regarded by a consulting physician of large experience in diseases of the eye. The urine, however, exhibited no coagulability by heat, and the symptoms, including the serous chemosis, which prevented an examination of the internal structures, did not justify the diagnosis; and neither has the result (this disease) proved much more amenable to medicine than hydrophthalmia. On the supposition of its dropsical

origin, while anodyne and mucilaginous fomentations and poultices were applied to the part affected, nitre and digitalis were administered, without advantage to the eye, or in increasing the quantity of urine; and it was not until after calomel had been continued for some days that any benefit was perceived. The protrusion, however, continued nearly three weeks.

But the internal structure of the eye had received irremediable injury, and the sight was lost. The organ is now (November 1844) smaller than its fellow, its atrophied condition being manifest not only by inspection, but by laying the fingers alternately on each globe covered by its lid. There is also a duskiness of the conjunctiva, which has been persistent, except as it gives place to evident vascularity from the effects of exposure to cold.

We now return to the views of Mr. Ferrall, alluded to in the early part of this article. That gentleman, encountering a case of rheumatism, accompanied or followed by a painful affection of one eye, with evident projection of the globe three-fourths of an inch beyond its fellow, and being unable to account for the protrusion, instituted a thorough anatomical survey of the eye and its investments. A distinct sheath was found, surrounding the globe, of fibrous consistence, of a yellowish-white colour, and which protected the globe from the action of the muscles, &c. This fascia* he calls "*tunica vaginalis oculi*," and as it was this which was affected in the case which originated the investigation, and in two or three other cases where a similar protrusion existed, he named the disease "*rheumatic inflammation of the tunica vaginalis oculi*." I cannot better present my own views respecting the case which occurred in my practice, and which differs from Mr. Ferrall's only as it was a sequel of scarlatina, than by transcribing his words:—

"Protrusion of the eyeball, which, when attempted to be explained by uncomplicated periostitis, requires some stretch of the imagination, appears a very simple and inevitable result of inflammation of the *tunica vaginalis*

oculi. There are here no soft parts to receive and divide the pressure, or protect the globe. The tunic is supported by other fibrous layers on its outside, as well as by the muscles, of which they constitute the sheaths. Inflammation of this capsule must, then, be immediately followed by pressure, and when we recollect its conical form, and that, as happens in cases of inflammation of other fibrous tissues, effusion at once takes place into the cellular membrane connecting it to the ball of the eye, we perceive there is nothing to prevent the dislocation of the latter.

"This effusion into the cellular tissue will make itself evident in another way. The conjunctiva, at the place where it forms the fold, in being reflected from the eyelid to the eye, closes up the *tunica vaginalis* in front. At this point it will not only receive the pressure of the effused serum, but will become separated from its connection with the sclerotic coat by the extension of the infiltration; hence the amber-coloured chemosis without vascularity of the conjunctiva. Chemosis, originating in conjunctivitis, always presents, in addition to serous infiltration beneath, one or other of the forms of hyperæmia. The chemosis of which we treat is, in uncomplicated cases, the consequence of effusion from a deeper source."

SOME OBSERVATIONS
ON THE
MEDICAL TOPOGRAPHY, CLIMATE,
AND DISEASES, OF THE BIGHTS
OF BENIN AND BIAFRA,
WEST COAST OF AFRICA.

By W. F. DANIELL,
Member of the Royal College of Surgeons of
England, &c.

[Continued from p. 645.]

YOUNGTOWN, or Newtown, is another native village built on the verge of a swamp, at the entrance of the creek leading to Warrée, and directly opposite the town of Reggio. Towards the close of the last century it was the usual custom for slavers and trading vessels to anchor abreast of this village, and the traffic which originated from these sources tended to elevate it into a place of some repute; accordingly, we find, in several old works, minute directions given for the attainment of

* This fascia was previously described by Tenon, in a paper read before the French Institute in 1804. See "*Mémoires et Observations sur l'Anatomie, la Pathologie, et la Chirurgie, et principalement sur l'Organ de l'Œil.*" Paris, 1816.

its anchorage. In proportion, however, as the slave trade declined, this part of the river became less and less frequented, and was finally deserted on account of its insalubrity, the palm oil vessels preferring to remain near the mouth of the river, where the danger from noxious exhalations and other morbid influences was considerably diminished by the cool and invigorating sea breezes, and the more open expanse of the stream. The population of Youngtown varies from 600 to 1000, and, from the unhealthy situation, is exposed to much sickness. Lepra, psoriasis, scabies, frambesia, and other morbid affections of the skin, are common not only in these but in the other districts of the delta of the Quorra. With the exception of syphilitic diseases, these may in general be estimated as the most numerous. Variola occasionally occurs after long periods, when it assumes an epidemic character, invariably sweeping off two-thirds of the inhabitants of those villages exposed to its pestilential visitations. Several years since variola of a peculiar malignant type broke out in Soudan, and passed from thence into the neighbouring kingdoms of Haussa and Benin, and so fearful were the ravages committed in its progress, that the majority of the Warrée towns narrowly escaped depopulation. Among the native tribes that inhabit the maritime regions of equinoctial Africa, there is, perhaps, no class of diseases that creates more terror or dread than the prevalence of these variolous epidemics. As but comparatively few negroes escape with life, when once attacked by epidemic small-pox, this circumstance may satisfactorily explain why so few are pitted with its characteristic marks, and also account for the custom that prevails, in some countries, of swearing by this malady; an oath which, from its dire import, is held inviolate. The other Exanthemata but rarely if ever appear.

Warrée, Owarrée, or Jackrée, is the metropolitan town of this river, and the seat of government. It stands on the northern side of the island of Warrée, an elevated tract of land separated from the circumjacent marshes by a bifurcation of the creek eighty or ninety miles to the eastward of Youngtown; both branches again uniting into one stream, that enters the Quorra a short distance below Eboe, as above

mentioned. This isle, from four to five miles in length, furnishes many beautiful and picturesque specimens of African scenery, and is richly endowed with all the wild exuberance of tropical vegetation. Its soil is a rich argillaceous loam with a substratum of red clay, of a moderate altitude above the surrounding mangrove forests, and alternately embellished by native farms and broken woodlands, that remind the stranger of a more northern country. The site of the town is one of the most eligible that could have been selected, being judiciously located on a gentle slope that commands both ingress and egress to each of the two streams. The number of its inhabitants amounts to six thousand. The *Bombax ceiba* (silk cotton tree), *Adansoniadigitata** (baobab tree), *Omphalocarpum procerum* (gourd tree), *Nymphaea lotus*† (white lotus), *Indigoferu enneaphylla* (trailing indigo), *Napoleana imperialis*, &c. flourish more or less in the cultivated districts of the island, with the ordinary accompaniment of cocoa nut, banana and plantain groves, or class of trees which on the coasts of Western Africa usually indicate the propinquity of native villages and plantations.

In Benin and Warrée circumcision is performed on all the males at a very early age, and the surface of the body, shortly after the operation, anointed by a white carbonaceous substance mixed with palm-oil, which, from its reputed prophylactic virtues, has been thought to obviate any injurious consequences that might otherwise ensue.

Excision of the clitoris, a rite universally practised by the females of other nations more to the southward, does not appear to be implicitly fol-

* This beautiful tree, which grows to an enormous magnitude in Bornou and other countries of Central Africa, is sometimes found in the elevated sandstone regions near the coast. Several portions of it are medicinally employed by the negroes in various maladies. In the interior it is known under the names of *kuka* or *kouka*, and Clapperton remarks, that "both leaves and fruit are considered to a certain extent medicinal. The leaves, mixed with trona and gussub, are given to horses and camels, both for the purpose of fattening these animals, and as a cooling aperient. They are administered to the former in balls, and to the latter as a drench. The white mealy part of the fruit is very pleasant to the taste, and forms with water an agreeable acidulous beverage, which the natives, whose libidinous propensities incline them to such remarks, allege to possess the virtue of relieving impotency."—*Journey from Kouka to Marmur*, p. 11.

† The sacred lotus of the Egyptians.

lowed by the women in this river, unless it is by those who have been formerly resident in some of the Eboe towns on the Quorra. A process, however, of quite a dissimilar character, is adopted by many females of the Jaboo country, and the result is, I believe, considered by them as ornamental; the clitoris is artificially elongated by means of small weights appended to it, and gradually increased in size until it has been lengthened several inches. Instances have come under my notice in which ulceration had gone on to such an extent as to require its immediate removal. In girls the catamenia generally appear about the eleventh or twelfth year, but their commencement and subsequent continuance often depend on the mode of life, habits, and constitutional peculiarities of the different grades of females, and likewise on those climateric agencies which so materially modify this uterine secretion. Pleuritis, pneumonia, phthisis pulmonalis, with other morbid conditions of the parenchyma of the lungs, are of greater frequency during the cold rainy months, and are accompanied by more vascular excitement than in the similar affections that occur in the dry months. Dysentery, diarrhoea, colic, and numerous disorders of the chylipoietic viscera, may be also more prominently noticed in the rainy months. Phthisis and dysentery are the most fatal complaints in low marshy localities, and carry off numbers of the aged and debilitated slaves. Of the species of intestinal worms, teniae and ascarides are the most common, particularly the former, and the populations of several inland countries not unfrequently suffer severely from their continual existence. Women, and the inferior class of slaves, who live exclusively on vegetable food without condiments, are those chiefly affected. More recently, the introduction and plentiful supply of European salt has somewhat diminished their occurrence. Hepatitis, induration, and other organic lesions of the liver, are rapidly increasing among the male inhabitants, from their immoderate use of ardent spirits of a very inferior quality, now abundantly brought by European traders for barter. Dyspeptic, and a wide range of nervous disorders, equally emanate from the same stimulant causes. Cerebral diseases of a very serious nature seldom

come under observation; but cephalalgia from febrile disturbance, constipation, and exposure to the sun, is extremely prevalent in both sexes, and at all ages. The custom of repeatedly shaving the head of every infant for several months, nay, even years, after birth, is one universally in vogue throughout these countries of the Bights, and is evidently regarded in the light of a prophylactic measure of no mean value. I may here observe, that most of the children of these maritime regions possess a weak and delicate frame, and do not enjoy good health until they have arrived at a mature age. Maniacal diseases are uncommon, and a remarkable exemption takes place from idiocy in most of the populations of the towns previously mentioned; whether children so affected are put to death, as some native doctors have gravely asserted, appears to me very questionable, if applied to this river; probably such may be the case in others.

Chronic ulcers, especially on the lower extremities, are frequent, and well-marked cases of elephantiasis may sometimes be seen in the slaves newly imported from Soudan. These comprehend the outline of the principal maladies that exist in the Rio Formosa and slave coast, but there are others, also endemic to them, to which I shall advert on a future occasion.

From Youngtown seaward, the right, or, as it is denominated, the Boobee side of the river, presents precisely a similar aspect to the one lately described. Shallow indentations and occasional projections of the banks, clothed by young mangrove bushes, with a solitary creek here and there, are the only objects that meet the gaze from the above town to Callear Creek, a distance of ten or twelve miles. This creek nearly faces the one leading to Jacqua, and is of greater magnitude than the others in this part of the stream. It has been supposed to communicate with the Rio Esclaves, as canoes from that river frequently visit the factories by this route. An inconsiderable village, named Battarra, is situated on the left bank, near the entrance, and a remarkable promontory, termed Jo Point, may be observed at its confluence with the river: in the vicinage of the latter is the town of Boobee. Bubie, or Boobee, is now the

principal seaport of the kingdom of Warrée: it is erected on the margin of the mangrove swamps, with a fine sandy beach in front, which also continues down the river to south-east point. It contains a population of seven hundred, who are an indolent and evil-disposed people. A small rivulet separates it from Ullaby, a miserable village, near which are the ruins of an old English factory. Salt-town lies a mile and a half distant, at the mouth of the river opposite north-west point. No mercantile establishment existed in this river before 1786, when the French erected a fort, adjoining one of the villages near its embouchure, which was destroyed by the British cruisers in 1793. It may be necessary to state that the most healthy anchorage for vessels visiting this stream is between the towns of Boobee and Salt-town.

The natives of the Rio Formosa are of Eboe descent, and partake of the same moral and physical traits that distinguish the people of that country. In place of the short muscular figure, thick lips, and flat expanded nose, of the Krooman, they are tall, slim, and more symmetrically moulded, with a skin varying from a light yellow to a dark brown, and a countenance the melancholic expression of which is rather prepossessing than otherwise. Yams, plantains, maize, cassava, various kinds of fruits, fish, fowls, monkeys, goats, &c., prepared with palm oil, and highly seasoned by pepper, comprise the diet on which they uniformly subsist. The beverage in general use is the exuded sap of several palm trees: the *Raphia vinifera* and *Elais guineensis* are those from which it is usually drawn. The liquor thus obtained is allowed to ferment, and hence it obtains those intoxicating powers which render it the favourite drink of all the inhabitants of the Western coast of Africa. It is also much valued for its diuretic properties, and is administered in different modes with other native medicines. The *Cypræa moneta*, or East India cowrie, constitutes the currency of the country.

[To be continued.]

REMARKS ON DR. PATERSON'S APOLOGY.

BY SCRUTATOR.

To the Editor of the Medical Gazette.

SIR,

THE members of the medical profession will surely be surprised, that in answer to the distinct charges, involving points of character, which ought to be dearest to a physician, Dr. Paterson has offered no defence. I may now, therefore, assume that he has been guilty of practising a gross deception, suppressing letters, and of various wilful misstatements. He has been arraigned before his profession for these deeds, and his justification is, that he had formed a bad opinion of the candour of the person with whom he had a dispute about a corpus luteum. "I feel," says Dr. Paterson, "that I owe a statement by way of apology, to my professional brethren, for the means which I adopted to procure the delivery of a candid opinion on the preparation in dispute, from Dr. Lee. For the following reasons I considered myself justified in having recourse to a plan with Dr. Lee, that I never would have had recourse to with any other member of the profession."

It would have been difficult to imagine, without the evidence of the fact, that any person possessing the education of a physician, and the station of a professional man, could have written in the above manner. Let me put this apology of Dr. Paterson clearly. His opponent was once guilty of theft; therefore he assumes the privilege of committing murder. Really, sir, the logic would be ridiculous, were not the conclusion monstrous. Such a defence might be applauded among mohocks, but in what atmosphere has the Doctor lived, that he should dare to insult us with his arrant trilling? Himself accused, he becomes accuser! He has neither the discretion to feel that he should defend himself against the strong evidence of facts, nor the delicacy to know that until he has purged himself of the stain of these grave charges, no accusation of his can attack the character of a respectable man.—I remain, sir,

Your obedient servant,

SCRUTATOR.

February 18, 1845.

ANALYSES AND NOTICES OF BOOKS.

“L'auteur se tue à allonger ce que le lecteur se tue à abrégé.”—D'ALEMBERT.

Practical Observations and Suggestions in Medicine. By MARSHALL HALL, M.D. F.R.S. L. and E. &c. &c. Churchill. 1845.

DR. HALL informs us that he has published these “Practical Observations and Suggestions” in an *unpretending* form; 1st, that they may appear in the *modest* manner becoming such a trifle; and 2dly, that they may be readily portable:” for his ambition is, “that they may become the companion of the student, and of the country practitioner, in some of his lonely drives, especially of those whose time is too much taken up by practice to admit of their reading larger and denser volumes.” After a eulogistic chronicle of his labours, the Doctor proceeds to discuss in proper spirit two systems of quackery which have recently occupied the public attention—homœopathy and hydropathy. The former is, indeed, “the art of amusing the patient whilst nature cures the disease:” the latter possesses great power. It may be compared to gambling when the stakes are high. The various profuse applications of cold water, internally and externally, which this system embraces, are measures which may be fraught with good and evil; and if scientific and honourable physicians had taken up the subject in the way of careful and philosophical investigation, much benefit might have been conferred on mankind by its means.

“But hydropathy is a system which comprehends various most powerful agents: the profuse ingurgitation of cold water, the violent affusion of cold

water, lotions of cold water applied over extensive surfaces, &c. These agents are combined and applied to patients whose diseases are equally complicated. Has this problem—To what special cases is each of these powerful remedies adapted?—been solved with all the care and attention so momentous a problem, big with life and death, health and disease, good and evil, demands? Who of our hydropathists is capable of solving such a problem, or has given a tithe of the time to the subject which the solution of such a problem requires?” * * *

“Without a remedy (homœopathy), and in spite of the remedy (hydropathy), patients may, and do, recover. The public then never stop to inquire, but conclude at once, very philosophically of course, that the *post* is *propter*,” p. 12. Again, “if we wish to ascertain the extent of the unaided power of Nature in the cure of disease, let us act fairly and honestly, and try ‘the médecine expectante,’ without attempting to lure, delude, or amuse the weak-minded patient by that absurdity homœopathy, with its infinitely silly, infinitesimally small, doses of medicines. Or if we would really prove the effects of the internal and external use of cold water, let us not begin by hydropathic institutions, but by cautious investigations, following the example of the late Dr. Currie, discreetly using this agent of power for the public good, to the honour of our profession.” p. 13.

We cannot compliment the Doctor for uniform perspicuity of style. The paragraph at the foot of page 18 would be apt to puzzle a practitioner in his lonely rides, especially if the roads were rough, and his nag “a trick of stumbling had.” The following parallel quotations illustrate the *modest* manner:—

“I conclude the present chapter by referring my readers for further information to my ‘New Memoir,’ which contains the latest facts and views on the subject, and by stating that I believe the results of *my* investigations present the key to the diagnosis of the diseases of the nervous system.” p. 24.

“I may be here allowed to refer to my ‘New Memoir’ on this subject, as containing the shortest, yet the most complete, view of this subject.” p. 159.

“I would refer those who wish to prosecute this subject (scarification of the gums) to my work on the ‘Diseases and Derangements of the Nervous System,’ but especially to my ‘New Memoir,’ which contains the most *lucid* and recent view of the whole subject of the physiology and pathology of the true spinal system.” p. 33.

In the remarks on the nature and treatment of stridulous convulsions in

infants, our author, unfolding the same modest manner, states that "the series of cases occurring in the same family, and given in the *Lancet* for April 17th, 1841, and for July the 9th, 1842, *must have excited the deepest interest in the profession!*"

In the succeeding chapters, on the use of setons, curvature of the spine, temperature of the sick-room, apoplexy and paralysis, the practitioner will find various useful suggestions.

For the prevention of milk abscess, and milk fever, the Doctor enjoins depletion of the milk ducts. For this purpose the infant should be put to the breast at the moment it is born. If, in spite of this, the mammae become in the slightest degree tumid, or febrile action be set up, another and a stronger infant should be applied *without delay*. Of course it will be the duty of the accoucheur to provide relays of vigorous suckers under such circumstances. "I do not pretend, in the above proposition, to have advanced any thing new; but in proposing such promptitude, perseverance, energy, and steadiness and decision of purpose, with which I recommend the measure to be adopted, if these be fully apprehended, I believe I do propose something new."

There is a curious chapter on "the temper-disease," from which we transcribe the following:—

"When a child's stomach and bowels are disordered, the temper is fretful; and the same thing is true of older children; so that the natural disposition, however amiable, becomes perverted, and the patient may become a burthen to his family and friends. In all such cases the patient is apt to be blamed, although really to be pitied; though it must be confessed that the perversion of temper might frequently be controlled, and the physician's attempts to relieve might be seconded where they are but too frequently opposed.

"The most frequent, yet the most extraordinary of these perversions of temper, are seen in young females. It is a species of aberration of the intellect, but short of insanity, real enough, but exaggerated, fictitious, factitious, and real at the same time. It frequently has its origin in dyspepsia, hysteria, or other malady, and in emotion of various kinds, such as disappointment, vexation, &c. Its object is frequently to

excite and to maintain a state of active sympathy and attention, for which there is, as it were, a perpetual morbid, and jealous thirst. It was rather aptly designated, by the clever relative of one patient, an *ego-mania*.

"One patient cannot articulate; another cannot walk; a third cannot eat, cannot swallow, or, if deglutition have been performed, does not retain the food on the stomach, but, without nausea, and apparently without effort, returns it, as it were, by an act of easy rumination.

"I think I have known one and the same patient forcibly to retain the contents of the intestines until an enormous tympanitic distension was the consequence; and to retain the urine until the pelvis of the kidney became distended, and the kidney itself enlarged.

"The abdomen of a patient, a malingerer in the hospitals and workhouses, was marked extensively by leeching, cupping, and setons, and it was proposed to extract a supposed diseased ovary, and to this operation the patient pretended to be ready to submit!

"I was consulted in the case of a young lady, who was affected with paroxysms of a violent, apparently spasmodic, action of the muscles which raise the left shoulder, attended by a partial inspiration; the attack usually came on *horâ somni*, and many were the wakeful hours which this affection caused to the patient, her friends, and her nurses. I then suspected, but would not believe, that these muscular actions were voluntary; I now believe they were so.

"In another young lady, a similar apparently spasmodic action, more constant or less in paroxysms, affected the muscles which raised the right thigh. I always regarded this affection as one denoting temper.

"In one patient the fingers were forcibly contracted into the palm of the hand. In other cases there are various forms of lameness. Every one remembers the famous case of Miss Pancourt.

"One young lady was affected with ptosis. Another was unable to write, except in zig-zag forms, a little like the effect of real tremor.

"This affection is not limited to females, or to grown-up persons; an athletic youth of 16 pretended to be affected by paralysis of one lower ex-

tremity. Sir B. Brodie saw him with me, and agreed with me that it was feigned; and our opinion was confirmed by perfect recovery.

"Nor is it confined to adults: one little patient, aged ten, under the influence of jealousy, feigned a regular evening attack of delirium, being frightened at lions, tigers, bears, &c. and at one time could not articulate, and at another could not swallow. A little boy, aged eight, feigned a regular evening attack of spasmodic affection.

"Having thus sketched the case of the temper-disease in general terms, I shall now proceed to describe this singular affection more particularly. I hope not to be mistaken. I do not regard it as entirely a feigned disease. It is, originally at least, the result of malady, or of some mental or bodily affection. It is allied to hysteria; and hysteria—hysterical palpitation, for example—is a real disease. It is best illustrated by the effects of derangement of the stomach and bowels in infants,—and who would think of correcting a child for temper which was the immediate, natural, and inseparable effect of bodily disorder? It is a perversity, an insaniola, originating in bodily disorder or mental affection, and perpetuated by a morbid indulgence of temper, and desire for sympathy and attention.

"In the midst of such a case as this, the last resort—a forlorn hope—has been to homœopathy and mesmerism."

Sterility is a favourite subject with the Doctor, under the name of *aphoria**. He admits that it frequently depends on organic defect; but the fact that a first child has been born after many years of marriage is sufficient proof that in other cases the defect has arisen from causes of a functional and less permanent nature. Taking advantage of the extraordinary sympathy subsisting between the mammæ and the uterus, he recommends, on reflex principles, a robust infant to be repeatedly and perseveringly applied at the return of the catamenial period, in the hope that the secretion of milk may be excited, and the uterine blood diverted from the uterus and directed into the

mammary vessels, and that a change in the uterine system, and a proneness to conception, may be induced. "I would propose, then, that the patient should sleep, for one week before and during each catamenial period, with an infant on her bosom." p. 157.

For prosecuting this ingenious scheme on a large scale, it would be desirable to have a "baby delivery company" established, which would supply lusty sucklings at so much a night. None manifesting any signs of *temper-disease* ought to be issued. We have no doubt the husband would get speedily reconciled to the mewling and puking of the little innocent, buoyed up by the prospect of his wife becoming a joyous mother of children. We only fear that delicate ladies might have their rest seriously disturbed by the struggles of the infant incubus, vainly seeking to allay its thirst at cisterns which hold no milk.

The following cursory remarks on prognosis are not unimportant:—

"The physician is made responsible for every case of sudden dissolution. His only protection is in a most explicit and even repeated prognosis of the event—a thing sometimes impossible.

"No one would prognosticate a sudden dissolution in chlorosis, however inveterate and severe. Yet I have known four examples of a sudden, or rapid, fatal termination in this disease.

"Few physicians would think it necessary to forebode such ill in cases in which profuse blood-letting had been adopted, or profuse hæmorrhage had occurred, if the patient appeared to be, however slowly, convalescent. Yet, in such cases, sudden death has occurred so frequently as not to be a very extraordinary event.

"But the most treacherous cases are those of intestinal obstruction, from various causes. The patient shall have suffered from sickness,—rejecting all food and medicine; and from constipation, resisting every kind of aperient or purgative, however administered, whether swallowed, injected as an enema, or applied to the tongue (croton oil), or externally: at length the bowels shall be moved satisfactorily, and the patient shall appear better in every respect! The appearances are fallacious. The powers of the heart, (so apt to be impressed through the medium of the stomach and bowels)

* A barefaced plagiarism of the substance of Dr. M. Hall's chapter on *Aphoria* will be found in a production that has just appeared, "On the Remedial Influence of Oxygen, or Vital Air," &c. by J. Evans Riadore, M.D. F.L.S.—See p. 80-84.

shall have yielded to the struggle; a state of the most insidious sinking has set in. Food is retained; the bowels are freely moved; all pain is gone; the patient, as I have said, appears better in every respect; but in the course of the night, or in the course of twenty-four hours, sinks and expires! I could not, if it were necessary to do so, describe this painful state of things, whether the feelings of friends or those of the physician be considered.

"In diseases of the head; in diseases of the heart; in diseases of the blood (whether mere anæmia, or that which occurs in asphyxia, diabetes, albuminuria, extreme dyspepsia, &c. &c.); in cases of the exanthemata, especially variola and scarlatina; sudden death occurs. Attacks of epilepsy are sometimes suddenly, sometimes less suddenly fatal. Cholera, dysentery, even diarrhœa, occasionally induce rapid and unexpected sinking. I have already noticed the effect of effectual relief to the bowels after constipation.

"Indeed, the influence of the intestine on the heart is most remarkable; in mere dyspepsia, the nose, ears, hands, and feet, are apt to be cold and livid; one of the most distinctive marks of tuberculous disease in the abdomen is a frequent, small pulse, with still greater lividity and coldness of the nose, ears, hands, and feet; in inflammation of the intestine, the pulse is known to be of remarkable smallness; the same thing is observed in hernia. This subject deserves to be prosecuted further, both in a physiological and pathological point of view.

"In the course of various diseases, the most insidious sinking is apt to occur, and the physician should treasure up any facts which lead to its prompt detection. I shall enumerate several of these:—

"The first is—breathlessness. This is observed when the patient moves about—in walking, or, in acuter cases, even in bed. It is heard by the attentive physician. It is merely what I have termed it—a little audible breathlessness. It occurs in diseases of the heart; in extensive diseases of the lungs; in cases of exhaustion; in cases of debility. It denotes great danger, and almost certain death.

"A second symptom of this kind is—a slight crepitus in the breathing, heard without the stethoscope. The

rattles in bronchitis, or other diseases of the lungs themselves, must be excluded. The crepitus to which I allude comes on in the course of fever, and other diseases of the general system; in extreme exhaustion and debility; in disease in the head or abdomen; as an early symptom of the sinking state.

"A third symptom, frequently conjoined with this crepitus in respiration, is tympanitic tumefaction of the abdomen. Both arise from the same cause—a deficiency and failure of the ganglionic nervous power.

"There is a fourth symptom, which I have observed in puerperal diseases, chiefly, of fearful, if not fatal, tendency: it is a peculiar severe pain in one side of the neck; I know not of what nature; but I have observed it in fatal cases so frequently, as to think it worthy of being thus pressed upon the attention of my medical brethren."

Chapters 29 and 30 contain some interesting pathological observations on gangrene of the face; and Chapter 35 furnishes the details of a case of senile gangrene treated by the nitrate of silver, by Mr. Higginbottom. The subject was a retired tradesman, of full habit, and seventy-three years of age. The third and fourth toes had assumed a dark colour and become a little swelled; and there were two small purple vesications on the lower part of the leg. The disease had existed for several days. The solid nitrate of silver was freely applied over the affected toes and surrounding healthy skin, previously moistened with water, as also over the denuded surfaces of the leg, the vesications having been previously removed. Adherent eschars formed; the inflammation was subdued, and all further mischief prevented. In due time the eschars were thrown off, leaving the parts underneath healthy: no constitutional remedies were employed. The patient lived three years after, without return of the complaint, and died ultimately of old age.

Dr. Hall attacks nævus, most chirurgically, by passing a needle of moderate size, and with cutting edges, through it, so frequently as to induce inflammation with deposit of lymph, and to obliterate and consolidate the vessels of which it is composed without incurring any risk of danger from sloughing. The needle

should be passed in various directions, from one point in the circumference of the nævus to several points more or less opposite. The punctures must be made near the surface in the superficial arterial nævus; but into textures more or less deeply seated in cases of the prominent capillary nævus. The operation needs to be repeated at distinct intervals of two, three, or four months, according to the state of the case, and the progress of the cure. The object of this plan is to avoid pain, hemorrhagy, and scar, and to substitute cicatrix for nævous tissue. Five cases are adduced in corroboration of the safety and efficacy of this mode of treatment. M. Blandin has of late been adopting a congenerous method; with a two-edged tenotome, a subcutaneous puncture is made at a little distance from the growth, and the instrument afterwards freely moved in different directions. Two compresses and a bandage are then applied over the tumor.

Chapter 40 is occupied with the means of preventing insidious diseases of the brain in children. Two cases are given; the first in the shape of an epistolary communication to an M.P. After pointing out various measures of hygiene, the doctor touches upon diet—a little mutton should be taken thrice a day, at breakfast, dinner, and tea; and the vegetable food should consist of stale bread, well-cooked rice, and mealy potatoes. When the bowels are not relieved once daily, a dose of *baume de vie* is to constitute a *chasse-diner*. The medicines recommended are from five to ten drops of steel wine, given in a table-spoonful of water in the midst of meals, alternated monthly with from half a grain to a grain of sulphate of quina, followed subsequently by a course of pale Indian ale. While we formally protest against the system of drugging food, as a general rule, we are not prepared to gainsay that in the skilful hands of an M.P.'s cook, even a *gigot de mouton au vin de fer*, or a *côtelette à la quinine*, may not be a palatable dish.

Tuberculous disease in the abdomen is discussed at some length in Chapter 43. It is, as our author judiciously remarks, the most insidious of all those diseases which may be considered as necessarily and progressively fatal; and is most unequivocally a family or hereditary complaint. Females are

more prone to it than males. It usually occurs from the age of fifteen to that of twenty-five years. It is mainly characterised by three symptoms:—great tendency to coldness and lividity of the extreme parts of the body, a frequent pulse, and slow but progressive emaciation.

“The aspect of the countenance is altogether peculiar, especially in cold weather, together with an obvious emaciation and expression of languor and disease; the end of the nose is livid in colour, and cold to the touch; and there is, in general, either paleness or a slight degree of flushing.

“Similar observations may be made respecting the general surface. There is emaciation; the skin is soft, and apt to become moist; and there are general perspirations during sleep, especially in the early part of the morning; to prevent this perspiration, the patient frequently endeavours to keep awake. There is an undue sensibility to cold observed on the slightest unexpected exposure,—as the opening of a door,—and the patient usually creeps over the fire. Sometimes I have observed the back of the hands and the fore part of the legs to assume a peculiar brown colour, from being burnt by this constant exposure to heat: the hands and fingers are apt to be extremely livid and cold.

“The mode of walking is peculiar, being attended by stooping, weakness, and caution.

“The pulse is always frequent, and generally regular. It is earlier and longer frequent in tuberculous affection of the abdomen, than in that of any other cavity. I have known the pulse to be between one hundred and one hundred and twenty for several years.

“The emaciation in tuberculous disease of the abdomen is uniformly, but very slowly, progressive. It is accompanied by a state of unvaried debility; and, in the later periods of the disease, by some œdema, generally observed more in one leg than the other.

“The other symptoms of this morbid affection are less constant; they are chiefly—an augmented appetite for food; copious, pale, alvine evacuations; and pain, and sometimes a perceptible tumor, in some part of the abdomen, especially in the iliac or

hypogastric regions. The catamenia simply become scanty, or cease, without undergoing the changes observed in some cases of disorder of the general health.

"There are altogether a peculiar appearance of the countenance, a peculiar mode of walking, and a peculiar attitude and manner in general, all denoting debility and great disease; and if to these be added the peculiar sensibility to cold, and tendency to coldness and lividity of the extreme parts of the body, the very gradual emaciation, and the habitual frequency of the pulse, it is scarcely possible to mistake the nature of this disease: but, in practice, the diagnosis requires very careful and minute observation."

The principal causes of this morbid affection are, among the poor, sedentary habits, scanty food, a damp atmosphere, and defective clothing; and, among the rich, warm apartments, reclusive studies, and a variable mode of dressing. The chief preventives are a nutritious and animal diet, an active and regular system of exercise, warm clothing, sponging the surface, and a strict attention to the general health.

Chapter 46 is devoted to the consideration of certain effects of intestinal irritation, which, although of an acute and alarming nature, have not, according to Dr. Hall, been always understood in practice, or discriminated from some other morbid affections of a totally different nature, and requiring a varied, if not an opposite, mode of treatment.

"The case resembles, in many instances, the most acute phrenitis; and it is this form of the disorder in particular to which I wish to draw the attention of the profession. In other instances, the affection has assumed the character of inflammation of the intestines or peritoneum. Occasionally, the seat and kind of pain have led to the suspicion of pleuritis. Or attacks of palpitation have suggested the idea of disease of the heart.

"Very frequently two or more of these affections take their rise in succession, the first or second probably ceasing entirely before the subsequent one is established—an event which has, I believe, often led to an erroneous idea of the metastasis of inflammation or other morbid affection from one organ to another.

"The attack generally takes place

rather suddenly. It usually begins with severe rigor, which is succeeded by great heat of skin, and eventually by perspiration. With the rigor or heat there is usually the accession of some severe local affection.

"The changes in the course of the disease are, like the first attack, generally sudden. The patient is better and worse, and the most urgent messages are sent at different times to the medical attendant.

"Generally the patient will be found to have been previously subject to disorder of the bowels; afterwards he is apt to experience similar attacks, unless he be attentive to diet and regimen, and to the state of his bowels."

The indications to be kept steadily in view as regards treatment, are, to prevent inflammation, by cautiously bleeding, if necessary; to remove the cause of the affection by free purging; to allay irritation by an ammoniated opiate draught; to obviate exhaustion by nourishment; and to relieve the local affection by cold lotion applied to the head, a liniment to the chest, and a fomentation and liniment to the abdomen, according as the pain occupies one or other of these regions of the body.

Next in order is an essay on the state of sinking from various causes, which will repay perusal. It embodies the views of Mr. Hunter and Sir H. Hallford on the subject.

At page 340, an instance of chronic inflammation is detailed, in which impending suffocation was averted by the operation of laryngotomy, and the original disease subsequently removed by mercurial action. By the way, Dr. Hall adduces as a means of diagnosis in laryngitis, that the patient cannot "snuff up;" the volume of air thus admitted into the larynx being insufficient to produce that effect, although its due velocity is not wanting. In this manner, laryngitis, in which there is thickening of the lining membrane of the glottis or larynx, and consequent diminution of this orifice, may be distinguished from tuberculous ulceration of the glottis or larynx, in which, so far from there being diminution, there is augmentation of the orifice.

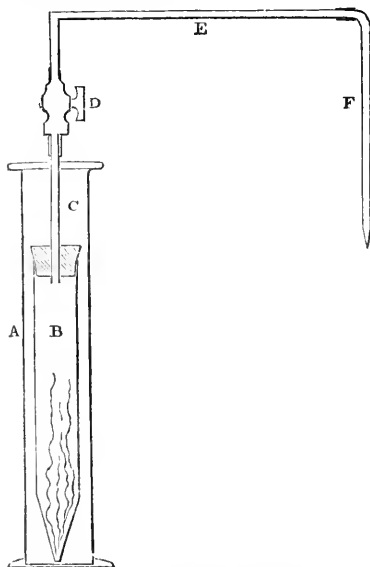
The concluding chapters are: On the treatment of the atrophy of paralytic limbs, by W. F. Barlow, Esq.; and on the relation of the spinal marrow to parturition, by W. Tyler Smith, M.D.

In terminating our notice of these lucubrations, which contain much that is ingenious and useful, though oddly strung together, we would humbly suggest to the eminent author that there is "a call upon mankind to value and esteem those who set a moderate price upon their own merits," or, as Horace finely expresses it :

Quanto quisque sibi plura negaverit,
A Diis plura feret. —

On determining the quantity of Arsenic, and at the same time obviating the inconveniences encountered, with MARSH'S apparatus.

It is well known that fluids mixed with glutinous matter are very liable to froth up when hydrogen is disengaged in them from the mutual action of zinc and a dilute acid; and that the froth obstructs the due performance of the experiment of Marsh. It is equally known, that much of the arsenic contained in the poisonous liquid so tested, escapes condensation and eludes measurement. A committee, appointed by the Prussian Government, have contrived an ingenious modification of that apparatus, which may be simplified into the annexed form—



A, is a narrow glass cylinder, open at top, about 10 inches high, and $1\frac{1}{4}$ or $1\frac{1}{2}$ inch diameter inside; B, is a glass

tube, about 1 inch diameter outside, drawn to a point at bottom, and shut with a cork at top. Through the centre of this cork, the small tube C passes down air-tight, and is furnished at top with a stop-cock, into which the bent small tube of glass (without lead) E is cemented. The bent tube F is joined to the end of E with a collar of caoutchouc, or a perforated cork, which will be found more convenient.

The manner of using this apparatus is as follows:—Introduce a few oblong slips of zinc, free from arsenic, into B, and then insert its air-tight cork with the attached tubes. Having opened the stop-cock, pour into A as much of the suspected liquid, acidulated with dilute hydrochloric or sulphuric acid (each pure) as will rise to the top of the cork, after B is full, and immediately shut the stop-cock. The generated hydrogen will force down the liquid out of the lower orifice of B into A, and raise the level of it above the cork. The extremity of the tube F being dipped beneath the surface of a weak solution of nitrate of silver, and a spirit flame being placed a little to the left of the letter E, the stop-cock is then to be slightly opened, so that the gas which now fills the tube B may escape so slowly as to pass off in separate small bubbles through the silver solution. By this means the whole of the arsenic contained in the arseniuretted hydrogen will be deposited either in the metallic state upon the inside of the tube E, or with the silver into the characteristic black powder. The first charge of gas in B being expended, the stop-cock is to be shut, till the liquid be again expelled from it by a fresh disengagement of hydrogen. The ring of metallic arsenic deposited beyond E may be chased onwards by placing another flame under it, and thereby formed into an oblong brilliant steel-like mirror. It is evident, that by the patient use of this apparatus the whole arsenic in any poisonous liquid may be collected, weighed, and subjected to every kind of chemical verification. If F be joined to E by means of a perforated cork, it may readily be turned about, and its taper point raised into a position such as when the hydrogen issuing from it is kindled, the flame may be made to play upon a surface of glass or porcelain, in order to produce the arsenical mirror.

A Treatise on Corns, Bunions, the Diseases of Nails, and the General Management of the Feet. By LEWIS DURLACHER, Surgeon Chiropodist (by special appointment) to the Queen. Simpkin and Co. 1845. Svo. pp. 196.

In this stage of society the chiropodist is as essential and acknowledged a character as any other special practitioner, and if the public are somewhat niggardly in awarding him a rank above his handiwork, they are no doubt proportionably liberal in their compensation, for, according to Adam Smith, crafts which are reckoned less reputable have higher money wages.

The author tells us he has endeavoured in the present work to communicate the result of nearly thirty years' practical experience in the diseases of the feet. To two species of those growths which so materially interfere with locomotive comfort, he has given the names of "vascular excrescence" and "neuro-vascular corn." The diseases of the nails are also considered, and directions given for the treatment, both palliative and curative, of that troublesome affection, "the nail growing into the flesh." Copious instructions are contained in a succeeding chapter, touching the general management of the feet, which even cardinals aspiring to the papal chair might profitably study. The topical remedies upon which Mr. Durlacher relies, are, nitrate of silver, cold water, spirit lotions, and soap plaster. There are six coloured plates appended, which represent certain of the above ailments under a very formidable aspect. We conclude by declaring we should not hesitate to submit our toes to his operative skill, if ever pinched by neuro-vascular or other corns.

MEDICAL GAZETTE.

Friday, February 28, 1845.

"Licet omnibus, licet etiam mihi, dignitatem Artis Medicæ tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

THE NEW BILL.

THE bill for the better regulation of medical practice throughout the United

Kingdom passed the first reading on the 25th current, and is to be read a second time on the 7th of April.

We congratulate Sir James Graham on the calm, able, and dispassionate manner in which he has dealt with this intricate subject. The whole tone of his speech, indeed, is one of conciliation towards all parties.

While certain very important amendments are introduced, some of the main provisions of the draught formerly submitted to Parliament are very judiciously retained in the present bill. The first of these is the establishment of a Council of Health, which shall have the superintendence and control over medical and surgical education, and which shall constitute a Board, the seat of which is to be in the metropolis, so as to be easy of access to the executive government, in order to assist in advising upon all questions affecting the health of the people at large; such as endemic and epidemic diseases. The second object which this measure is intended to effect is the abolishment of all monopolies in the medical profession, and to secure to all practitioners equal facilities of practice, as well as to afford a guarantee to the public of equality of attainments on the part of medical men. The chief end of legislation in such matters we have always maintained to be the protection of the public. Nor is this lost sight of; for whilst, on the one hand, equality of practice is conceded to the profession, on the other, equality of attainments is secured to the public. By the law as it will in future stand, no title to practise in the three kingdoms shall be granted in any one of the branches of medicine or surgery except to persons who have been previously examined before a competent tribunal, and pronounced fully qualified. None but such as have passed this ordeal shall be entitled to registration—a means

whereby their attainments shall be certified and made generally known. We think it highly desirable that the registry should be rendered compulsory.

The above were the leading objects of Sir James Graham's bill of last year, and he pledges himself to have them fully carried out, provided the present measure gains the sanction of parliament.

The proposed alterations are as follows: In the former bill it was contemplated to repeal the statute of Henry VIII. (14 and 15, c. 5), which gives to the members of the College of Physicians the exclusive right of practising in, and within seven miles of, the metropolis. It is not now the intention of the Right Hon. Baronet to repeal that act entirely, but only so far as to exempt from its penalties all physicians who shall be registered according to the provisions of the proposed measure. A clause, moreover, has been framed, whereby the Universities of Oxford and Cambridge will be exempted from its pale, and their graduates consequently confirmed in all their existing privileges. Sir James has found these learned bodies rather refractory as to foregoing their immunities, and, by way of conciliation, has inserted the above clause, whereby their graduates shall be entitled, as before, to practise according to their respective degrees throughout all England and Wales, save and except in the metropolis, and within seven miles of it. This provision will be certainly made in the proposed bill, unless the aforesaid Universities agree to come under its operation. We sincerely trust they will not hold out, if they mean their members to rank as registered practitioners, and to participate in the administration of the Council of Health.

To obviate all difficulty meanwhile, a particular arrangement has been

made between the College of Physicians and the Universities. An assessor is to be sent from thence to Oxford or Cambridge, who shall have the power of granting medical degrees in conjunction with these bodies, which shall confer upon their graduates the right of practising within the liberties of the College, if we may use the expression.

Sir James Graham has come to the conclusion, that it is not expedient to repeal the Apothecaries' Act in totality, but only in so far as parties who shall be registered under the proposed bill are concerned. The full exercise of the power to enforce penalties is to be left untouched. Hence the Apothecaries' Company will still be allowed to prosecute all unregistered practitioners, and all persons venturing to practise without holding their license.

An additional restraint, moreover, is to be imposed, which shall make it penal for any unqualified individual to assume the title of physician, of surgeon, or of apothecary, or any other title recognized by the bill. This clause is couched in the following terms:—

“And be it enacted, that every unregistered person who shall wilfully and falsely pretend to be, or take or use the name or title of physician, doctor, bachelor, or inceptor in the faculty of medicine, or surgeon, or licentiate in medicine and surgery, or apothecary, or any name, title, or addition, implying that he is registered by this act, or recognized by law as a medical or surgical practitioner, shall be deemed guilty of a misdemeanor in England and Ireland, and in Scotland of a crime and offence, and being convicted thereof, shall be punished by fine or imprisonment, or both, as the court before which he shall be convicted shall award*.”

This is obviously intended as a stringent means of protection for the public

* Times of Feb. 26.

and the profession against ignorant and unqualified pretenders.

It is further proposed to repeal that portion of the Apothecaries' Act which requires the examiners—who will henceforth be associated with physicians in the examination of the licentiates in medicine—to be members of a civic guild, the admission to which may be by purchase or inheritance, without any medical knowledge, or test of fitness. The qualification for an examiner shall be in future, that he is an apothecary of ten years' standing in practice, or a licentiate in medicine of the same standing; anticipating that after the lapse of ten years the examiners will be, in fact, licentiates in medicine under this act, and that under the general name of "licentiates" they will be general practitioners.

Sir James Graham expressed his earnest desire to have seen one common examination established for all men entering the profession, leaving it to the choice of each to take up the branch of surgery, or that of physic, according as it may suit either his studies or his peculiar ideas or wishes. To this plan objections have been raised which appear both reasonable and insuperable. The College of Physicians has always attached great importance to an University education; therefore, to enforce upon persons who have received that education such an examination as would be demanded of others at an earlier period, would greatly increase the protracted study of the physician, who is not to be eligible to practise till he is twenty-six years of age, by the new regulation. This objection, however, does not apply to surgeons; it is therefore provided that none shall be qualified as such till he is twenty-five years old, or unless he shall have been previously examined, and duly passed, as a licentiate in surgery and medicine.

Midwifery is to form a distinct object

of examination, and to be specified in the registration.

The Right Hon. Baronet doubts whether good would be done, or the honour and station of the general practitioners advanced, by dissolving the connection between them and the College of Surgeons, and giving them an institution of their own. He tells them they will have an opportunity of considering the changes now made, and of reviewing the requisition they have presented for a charter of incorporation, and that he will be delighted if the result shall prove a withdrawal of that requisition, and consequently a closer alliance with the College—

"A great and noble institution, which, with all its defects, has produced some of the most eminent and best surgeons in Europe; which possesses at this moment the finest museum in Europe, and, as a visitor, I may assert, one of the most renowned collections in physiology*."

He would not now anticipate a discussion on the recent charter granted to the College of Surgeons—that there are defects in it he is fully aware, but when he introduced for the first time a particular order into that body, which existed in every other College in England, Scotland, and Ireland, namely, the order of Fellows, it was necessary that a constituency should be created for the election of the Council.

Sir James Graham observes it was an obvious error in the bill of last session to ordain that a gentleman seeking to be qualified as a physician, should for the two years immediately preceding his examination at the College of Physicians have resided in the University. In many instances this would be found a great hindrance to education in a foreign country. It is therefore proposed to change the condition to two years' residence at the University, after matriculation, instead of two years before examination. With respect to at-

* Speech in Parliament.

tendance on foreign universities, it is deemed expedient to enjoin only one year's residence, out of the whole term of studies, which is three years.

The power of nominating permanently the Council of Health might be most safely left to the executive government, acting on its own responsibility in Parliament. But, as a mixed scheme of nomination and election has been proposed, the Home Secretary is inclined to abide by the provision introduced in the former Bill. In reserving to the Crown the nomination of six members of the Council, it is meant that a portion, at least, must be general practitioners, including country practitioners.

Among the omissions in the other bill, no power was given to the Council to remove a person from the register in case of flagrant misconduct. It is now intended to invest the Council with authority to remove from the register all parties who may be convicted in a court of law of any criminal offence, or who shall have used any false, or simulated testimonials, to obtain admission.

Another alteration is to be made, on the ground of misconception. It was proposed to give the faculty of physicians and surgeons of Glasgow equal power of licensing with the faculty of physicians and surgeons of Edinburgh. The proposition was made in the belief that the faculty of Glasgow had in the four counties adjacent to that city power to license practitioners both in surgery and in medicine; but the question has been directly raised, and it has been determined that they have no such power so far as medicine is concerned. The sole power is therefore to be entrusted to the Colleges of Physicians and Surgeons in Edinburgh.

Leave having been given to bring in the bill, Sir James Graham next moved for leave to introduce a bill for four new charters to be granted to the Col-

leges of Physicians in London, Dublin, and Edinburgh, and to the College of Surgeons in Edinburgh, which he said would serve to render more efficient the operation of the above measure. So far from rendering these bodies more close, the intended charters will render them more open.

MORTALITY OF THE METROPOLIS.

Deaths from all causes registered in the week ending Saturday, Feb. 15.

ALL CAUSES.....	1112
SPECIFIED CAUSES.....	1110
I.—Zymotic (Epidemic, Endemic, and Contagious) Diseases, 178; among which, of—	
Small Pox	33
Measles	19
Scarlatina	38
Whooping Cough	29
Croup	7
Thrush	8
Diarrhoea	9
Dysentery	0
Cholera	0
Influenza	3
Typhus	25
II.—Dropsy, Cancer, and other Diseases of uncertain or variable Seat 120; among which, of—	
Inflammation	0
Dropsy	38
Scrophula	3
Cancer	17
Atrophy	10
Debility	29
Sudden Deaths	16
III.—Diseases of the Brain, Spinal Marrow, Nerves, and Senses, 175; among which, of—	
Hydrocephalus	37
Apoplexy	22
Paralysis	28
Convulsions	61
Insanity	1
Delirium Tremens	2
IV.—Diseases of the Lungs, and of the other Organs of Respiration, 368; among which, of	
Pneumonia	92
Hydrothorax	6
Asthma	43
Phthisis or Consumption	153
Diseases of the Lungs, &c.	18
V.—Diseases of Heart and Blood-vessels	44
VI.—Diseases of the Stomach, Liver, and other Organs of Digestion, 82; among which, of—	
Teething	23
Gastritis	0
Enteritis	15
Tubercles	9
Hernia	1
Disease of Stomach, &c.	4
Disease of Liver, &c.	7
VII.—Diseases of the Kidneys, &c.	9
VIII.—Childbirth, Diseases of the Uterus, &c. 15; among which, of—	
Childbirth	13
Disease of Uterus	2
IX.—Rheumatism, Diseases of the Bones, Joints, &c.	14
X.—Diseases of Skin, Cellular Tissue, &c.	3
XI.—Old Age	86
XII.—Violence, Privation, Cold, and Intemperance.....	16

THE
LONDON MEDICAL GAZETTE,

BEING A
WEEKLY JOURNAL

OF
Medicine and the Collateral Sciences.

FRIDAY, MARCH 7, 1845.

CASES TREATED IN THE WEST-
MINSTER HOSPITAL.

With Clinical Remarks,

BY BENJAMIN PHILLIPS, F.R.S.
Assistant Surgeon.

Eczema treated by arsenic and warm water.

W. K., aged 49, was admitted into St. Mark's Ward, under the care of Mr. White, suffering from eczema in an aggravated form. For six years it had affected the left leg and thigh. The limb was hypertrophied, so as to have a slight resemblance to the Barbadoes leg, and the surface was intersected in all directions by deep fissures. A variety of plans of treatment had been employed in the case, but beyond a passing relief they had done no good.

Ordered to take Hyd. Chlor. gr. v., Jalap gr. xv., twice, with two days' interval. To have the affected limb bandaged, to have the bandages wet with warm water, and covered with oiled silk, so as to constitute a constant tepid bath, and to take Liquor Arsenicalis, minim. v. bis die.

Under this treatment, in three weeks the integument had become soft and smooth, and in six weeks he was discharged cured.

A. R., aged 24, was admitted as an outpatient under the care of Mr. Phillips. Both his arms, from the shoulder to the wrists, were affected with eczema in a form little less aggravated than the last case, but not of such long standing. He was treated in the same way, and the good effect of the topical treatment was made very evident. He applied the wet cloths to the whole arm, but the oiled silk was not kept on above the elbow. In a fortnight the skin below the elbow became soft and natural; that above the elbow continued harsh, though much improved. In a month from the commencement of the treatment this severe affection was completely got the better of.

901.—xxxv.

REMARKS.—This simple plan of treating that extremely intractable form of skin-disease, chronic eczema, Mr. Phillips has followed with signal success in many cases. No case could have subjected it to a severer trial than the first. It was of six years' standing, the skin was greatly thickened and hardened, and it was intersected in all directions by deep fissures. It had been treated by various methods, with passing, but very temporary relief. It completely yielded to the above treatment, and within four weeks from its commencement the skin was as soft and as natural as that on any part of his body. He did not leave the hospital for a fortnight after the cure, in order to be assured that it was complete.

Strangulated hernia—Operation.

A. R., aged 52, and suffering from strangulated hernia, was admitted into Northumberland Ward, Dec. 20th, under the care of Mr. White. Soon after his admission he was seen by Mr. Phillips, who obtained from him the following history of his case. In 1829, while making a powerful effort, a portion of gut descended in each inguinal region. It was soon returned, and maintained reduced by a double truss. On many occasions it has escaped, but usually he has returned it himself. In several instances much difficulty has been experienced, and he has resorted to the hospital, where relief has been obtained. At present there is a large tumor on each side, extending to the scrotum. Considerable attempts have been made to reduce them; on the right side they have been successful, on the left they have failed. There is no abdominal tenderness, or constitutional irritation; but there is some nausea, with a clean tongue.

To be placed in a hot bath; to have the taxis applied; and, if those means fail, when taken out, to have ice applied to the tumor, to have Hyd. Chlor. gr. vj., and to have a castor-oil injection.

2 X

21st.—Those means failed; but the tumor is certainly smaller than it was yesterday. In other respects no change.

To have a large castor-oil injection every six hours. Ext. Coloc. Comp. gr. iij.; Ol. Carui. Gutt. ss. 4tis horis.

22d.—No relief. There is more sickness; the stomach has become irritable, but the tongue is clean; a slight tenderness over the lower part of the abdomen on the left side. Complains of want of sleep, but no general excitement.

To have the following enema every six hours: Sp. Tereb. ʒiij.; Ol. Ricini, ʒiss.; Liqueur Potassæ, ʒj. Turpentine fomentations to the abdomen, and Opil gr. j. at bed-time.

23d.—No material change. Sickness continues, and he is much inconvenienced by flatus.

To have Magnesie Sulph. ʒj., Aq. Carui, ʒj. every hour. A pill containing Ol. Rutæ, gtt. j. occasionally.

24th.—No very obvious change in the symptoms since yesterday; sickness still persists, but the flatus is less troublesome; the tongue is rather more coated; there is a slight increase of fulness and tenderness over the abdomen; pulse 86.

To persist with the aperient for the present; to have a common cathartic enema; to continue the turpentine fomentation.

25th.—This morning, soon after eight o'clock, he complained of more severe griping pain, which was soon followed by fecal vomiting. Between one and two o'clock, a consultation was held, and the operation decided on, because all means of acting on the bowels had failed, and because the symptoms were become more urgent. Even at this time the countenance was perfectly placid, the tongue moist, the pulse 84, the peritoneal tenderness not great, and the abdomen little distended.

The operation was performed by Mr. Phillips. A single incision, between five and six inches long, was made; it extended from above the neck of the sac to the lower part of the scrotum; the sac was soon exposed, and looked almost as strong as the aponeurosis of the external abdominal muscle. It was opened to the extent of nearly four inches, but there was scarcely any fluid in it except at its most depending point. The intestine was now exposed; it was very rough, and very dark from congestion, and it was evident that it would not bear much manipulation, but its condition was still not too bad to justify its return into the abdo-

men. The stricture at the neck of the sac was relieved so that the finger could be passed through the ring into the abdomen; although there was apparently ample room, there was much difficulty in inducing the intestine to return, so much so, as to give reason to think that there were adhesions, but, after very careful patient manipulation, it was returned.

10 o'clock P.M.—During the evening there has been considerable fecal vomiting, but no evacuation from the bowels; countenance still unchanged; pulse 92; some abdominal tenderness and considerable tormina.

To have an enema of a pint of warm water, and 2 oz. of olive oil, and to retain it as long as possible. Turpentine fomentations to the abdomen, and, if the vomiting continue, to have a drop of creosote.

26th, 8½ A.M.—Is much more comfortable; has had three copious evacuations from the bowels; the sickness has ceased, but not until after he had taken the creosote; tongue moist; some thirst; pulse 82; abdominal tenderness less.

9½ P.M.—Complains of sickness; has vomited several times small portions of sour bilious matter; tenderness a little increased; pulse 84.

To repeat the enema and turpentine fomentations, and to have Potassæ Bicarb. gr. x.; Acidi Hydrocyanic. ʒiij., occasionally.

27th, 9 A.M.—The bowels have acted freely, the tormina is lessened, there is some peritoneal tenderness, the tongue is somewhat loaded, the pulse is 80, and the stomach quieter.

To continue the fomentation, and, if there be much griping, the olive-oil injection to be thrown up at night.

28th.—Much relief was experienced from the injection; it remained up some time, and was followed by a copious stool. The wound is nearly healed by first intention.

29th.—He is in a more satisfactory state, but the tongue is coated. No stool since the night before last.

30th.—He complains of soreness about the wound, and a feeling as if "something had given way" while coughing. The wound is gaping, and a black sloughy-looking substance is apparent. The sutures are cut, the wound immediately opens to nearly its whole extent, when the black mass is found to be a large clot of blood in the course of breaking down.

Warm water dressing to be applied, and the olive oil injection to be administered.

31st.—He is very low; the edges of the wound have an erysipelatous redness; the bowels were relieved.

To have a mixture of Acet. Ammon. with excess of Ammonia, and 4 oz. of wine; to have a poultice over the dressing.

Under this plan he gradually recovered, and was discharged, at his own request, with a small sinus, which is now healed.

REMARKS.—The interest of this case appears to be comprised in the fact, that strangulation was so fully developed in a middle-aged person without occasioning any very pressing symptoms. The pulse did not exceed 86; the tongue was comparatively clean; there was little abdominal tenderness, and the countenance was free from anxiety, although near ten inches of intestine was under strangulation; still there were two capital facts present during five days—sickness of the stomach, and obstinate constipation.

The reason for this comparative absence of urgent symptoms is to be found in the circumstance that it was an old hernia, that there was a large ring, and that for some days the stricture upon the intestine was not close. It is true it was close enough to prevent the free return of venous blood, and ultimately to cause so much tumefaction of the intestine itself that the stricture then became a close one, and the necessity for operation urgent, although starving and ice were well followed up.

After the gut was liberated it suffered nothing to pass the protruded part for many hours, and the faecal vomiting continued. It was not until the emollient injection had remained some time in the intestine that stools were procured, and, even then, when the great quantity of cathartic medicine got vent, there was no profuse action.

On the third day, the external wound appeared to be nearly healed by first intention; on the fifth, it shewed signs of opening again, and the patient began to flag. On the sixth, the wound looked unhealthy, and an erysipelatous blush surrounded it.

Although there was still some abdominal tenderness, and a somewhat loaded tongue, it was necessary to give support, and that largely, under which he rapidly improved, and on the 27th day the wound had nearly healed.

OBSERVATIONS

ON THE

NATURE AND TREATMENT OF THE MORE IMPORTANT DISEASES OF THE NERVOUS SYSTEM:

With Illustrative Cases.

By EDWARD BLACKMORE, M.D. Edinb.
Member Extraordinary of the Royal Medical Society of Edinburgh, and Physician to the Bath Penitentiary.

[Continued from page 704.]

SECT. IV.—ON EPILEPSY.

SOME of its peculiar phenomena are highly interesting; such as (*a*) its singular feature, which distinguishes it from apoplexy, that the coma should go off entirely of itself, even when the disease is so severe as for the fits to be occasionally repeated ten or twenty times in a day: (*b*) that even when it has been congenital, or has existed from early childhood, it should persist through a prolonged life without much disturbance of the general health, or of the mental faculties: (*c*) that sometimes, when acquired in adult age, it passes into a periodical and purely spasmodic disease, the comatose part of the affection having subsided: (*d*) and that in some cases, after having become an established habit for many years, even after puberty, it entirely wears itself out.

It sometimes, yet astonishingly seldom, leads to palsy of the hemiplegic form. When it has become habitual, and its fits increasingly frequent, it is very likely to end in fatal apoplexy. When properly treated before the age of puberty, it is often cured; and even when acquired after puberty, and become habitual for years: but when it appears in early childhood, and persists to adult age, it is very seldom cured.

It is apt to induce a fatuous appearance of the countenance, but this is not always attended with a corresponding degree of mental imbecility.

"Will it recur?" is often a most anxious inquiry on its first appearing. There is generally much danger of its becoming habitual; yet even severe epilepsy has occurred once, and then entirely disappeared. If the exciting cause is recent, and not inevitable, if the head does not show irregular ossification, and if there is no family pre-

disposition, strong hope may be entertained of its non-recurrence if proper precautions are taken. Probably no other disease is so dependent for its recurrence on the habits and physical circumstances of the patient.

The immediate event of the fit is an equally anxious subject: it is very difficult, on the first occasion, to distinguish the coma of epilepsy, which tends of itself to pass away, from apoplexy connected with convulsions; the cases popularly styled "convulsions" in children are really often apoplectic; an accurate diagnosis may, however, be formed by considering the character of the spasms, of the breathing, and of the pulse, with the duration of the stupor. When consequent on other diseases, the prognosis is more serious than in the simple and primary affection; yet even when succeeding to apoplexy itself it is not incurable. Recovery is seen in young subjects, although coma has continued for eight hours, and after the vital functions have begun to fail. Hope is to be founded more on the nature of the predisposing and exciting causes than on the actual symptoms of the paroxysm.

The proximate seat of the irritation is the corpora striata, the medulla oblongata, and the encephalic portion of the spinal chord; and this irritation is often the effect of disease in other portions of the encephalon, the influence of which in inflicting pressure on the basal parts is easily understood from the structure of the head. Various cases show, indeed, that disease in the same remote portion of the brain may occasion either apoplexy, or hemiplegia, or epilepsy; the same sort or degree of influence is therefore not always communicated to the medulla oblongata and spinal chord; or, according to modern anatomical views, the cause of the difference in the effect is, that in epilepsy the organic portion of the spinal chord is irritable as well as the sensorium, and not in the hemiplegic or apoplectic cases; and in the former disease, also, the nervous origin of motor power is more affected than that of the sensorial functions.

The morbid appearances are, (a) a general enlargement of the arteries and veins, with fulness of blood; (b) sometimes a general softening of the brain; (c) an encysted abscess in the hemispheres, or suppuration at the crura

cerebelli; (d) induration and tubercles; (e) exostosis of the interior of the skull.

The most constant, and, in a practical view, the most important, condition which may be regarded as the proximate cause of epilepsy, is excited circulation in the encephalon: this state is either transient or more prolonged, and constituting an inflammatory condition, of which the convulsions are sometimes the first symptom. It is also primary and idiopathic, or symptomatic and secondary on irritation in other organs, particularly the gums and intestines in children, and the uterus and nerves external to the head in the adult. Confirmed habitual epilepsy has probably always its origin within the head.

Morbid congestion in general is spoken of as active or passive, *i. e.* attended with high action of the vessels, or with atony and inirritability.

It is doubtful whether the latter is ever the immediate exciting cause of the epileptic paroxysm; the analogy of convulsions in syncope from loss of blood might appear to favour an affirmative opinion, some pathologists maintaining that even blood-letting to excess makes congestion in the head; but whether this be true or not, convulsive syncope is not epilepsy.

Nor does a bloodless state of the brain ever seem to be the immediate cause of the fit. The predisposition is certainly connected in some cases with deficiency or poverty of the blood in a debilitated constitution—a weak nervous system being very liable to suffer from external irritants, and the weak-vessels being easily dilated by the distending force of the accumulated blood in them, lose their contractile power, and thus a state of passive congestion is habitually maintained in the head. This view of one variety of the predisposing causes is confirmed by the morbid appearances, and by the success of those remedies in the intervals of the fits which restore the contractile power of the vessels, and thus lessen their engorgement.

The invasion of the paroxysm, when supervening on exhausting diseases, or in weak constitutions, appears to be referrible to the same proximate cause—a fulness of blood in the brain, with strong action of its vessels; an action strong, if not absolutely, yet relatively, to the general powers of the vascular

system, in the individual patient, and by which the momentum of the encephalic circulation is for the time increased.

The predisposition is seen under the form of debility and impoverished blood, as above mentioned, and also under that of plethora and strength of constitution. It presents itself, in both its forms, in connection with a scrofulous constitution: its relation to a gouty habit is not so common. It is, in some cases, congenital and unalterable. The principal fixed elements of the predisposition are an enlargement of the vessels of the head; an irregular and protuberant ossification of the skull, with sometimes a deposition of osseous matter in the membranes; and hypertrophy of the brain itself. Of the variable elements of the predisposition, that of a loss of contractile power, with extreme dilatation of the vessels, appears to be the more important, and is more intimately connected with the chronic and habitual epilepsy.

The treatment of Epilepsy.

In all cases, in the paroxysm, either with turgescence of the vessels of the head, or with pallidness and coldness of the face, in the delicate and in the robust, in the recent and in the confirmed disease, the cold affusion is probably the most successful remedy; if then bleeding is practised, it should certainly be to a far less extent than in apoplexy; when excessive, it has only been the means of substituting one form of convulsions for another, or of inducing worse consequences. In that form of disease from a stroke of lightning, or a sun-stroke, or from a large quantity of spirituous liquors taken at a draught, experience shows that the best treatment consists of the cold affusion, followed by an emetic and ammonia, as soon as the power of swallowing has been recovered: bleeding in some such cases has been fatal. Besides the cold dash, a clyster of turpentine is alone required in most cases. Compression of the carotids also has been found useful.

In the intervals of the fits, the most generally curative treatment, in a vast number of cases which I have seen in public and private practice, has been the antiphlogistic, either evacuant or sedative. Small bleedings and cupping, shortly before the period of the

return of the paroxysms, have had a most salutary effect, while profuse bleeding has served to make the returns more frequent. In Case VII., under apoplexy, the good effect of scarifying the head is strikingly seen.

Purgatives are especially valuable; *e. g.* claterium and croton-oil. I have given, also, with good effect, a scrupulous dose of calomel; and in relaxed habits a combination of colocynth with the gum-resin of Cornel has succeeded well. The oil of turpentine is a most useful adjunct in these cases to castor-oil.

Emetics, particularly sea-sickness, have appeared safe and wholesome. Drains, such as the issue by incision on the occiput, are of unquestionable utility in most cases.

Sedatives, as colchicum and digitalis, have been often successful; and, when incautiously given, productive of equal mischief. The extent to which the latter drug is sometimes used deserves reprobation. The refrigerant sedatives, and the shower-bath, deserve more commendation; and as a means of keeping the head cool by night, the air-pillow is not contemptible. Terror is a sedative not easily managed.

In many cases of chronic epilepsy, on the other hand, the most successful treatment is not evacuant or sedative, but tonic—not that tonic plan which fills the vessels with blood, but that which increases their contraction, and equalises the general circulation. Of this class, the more successful, in my experience, is turpentine, in small and frequent doses: the sulphates of copper and of zinc, and the nitrate of silver, appear to act similarly to turpentine, but not so efficaciously.

When the fits have usually recurred in the night, the habit has been broken by an opiate at bed-time, and by the patient being awakened and leaving the bed.

Concubitus rite et legitime peractus has proved a remedy, just as its abuse has been one of the worst excitants of the malady.

CASE XXXV.—An unmarried female, aged 27, during the seven months preceding April 1827, was affected with epilepsy during the night season; the fits returned every fortnight, and were worse shortly before the menstrual periods; she had complained of severe pain in the head, vertigo, and occa-

sional delirium, before the convulsions were established. The fits usually began with the aura epileptica at the epigastrium; much urine was passed in the fits, the sleep profound after them. Her ordinary sleep was disturbed by frightful dreams. She had often, also, hysterical spasms in the throat; the bowels costive; the tongue white.

Croton-oil and Liquor of Potass.

These medicines purged strongly, and an ascaris was voided. After this the head felt better, and she passed a menstrual period without a fit. She then suffered from leucorrhœa, for which alum was given. At the end of a month the epilepsy and vertigo returned, and was connected with costiveness.

Croton-oil repeated, and a perpetual blister.

About May 19th, it was learned that the fits returned in sleep, although the blister had been discharging for three weeks. The general health was good. One drachm of oil of turpentine was then given daily, and exercise enjoined. She then escaped the fits for a month, while taking half a drachm of the turpentine daily, which made slight stupor; after which, being better, she ceased to apply for medical aid.

CASE XXXVI.—A baker, aged 26, in August 1827, after being worn down by hard work and exposure to the heat of the oven, got a second attack of epilepsy, for which he was bled at three times to three pounds within a fortnight. Afterwards, I saw him in an exhausted state, with a threatening of idiotcy, and complaining of severe nocturnal pains in the forehead; the pulse slow and empty. He was quickly relieved by oil of turpentine, ammonia, and tincture of rhubarb.

In February 1828, he came again under my care, having been ill for ten days of vertigo and severe pain at the heart in paroxysms of two hours, threatening syncope; his manner was stupified, and he was slow in answering questions; pulse 60; bowels very costive.

Leeches to the head, a blister on the neck, and croton-oil daily.

The oil vomited and purged, after which he had no return of the symptoms; and by continuing purgatives he was completely relieved.

In May 1829, he again suffered from

pain in the head, and costiveness, with a full pulse; and was again cured by purgatives.

CASE XXXVII.—A female, aged 28, had had epilepsy since she was seven years old, and had been bled occasionally for it. When seen by me, the fits returned every month; tongue white; pulse small; habit costive.

Purgatives and oil of turpentine ordered.

At the end of two months she had had no fit, and felt much better.

CASE XXXVIII.—A boy, aged 14, in March 1830, had two epileptic fits, which disappeared until the end of May, when he was affected with a sudden falling down, attended by deep sleep, and foaming at the mouth, but without spasms.

June 4th.—Pain at the forehead; manner stupid; eyes fixed at times.

Head shaven; bleeding to ten ounces; mercurial purgatives and salines.

6th.—Headache and vertigo; no fever; pulse slow and tense; senses good; tongue white; bowels purged.

A blister and cold to the head; rhubarb and magnesia.

10th.—An epileptic fit from exposure to the sun; pulse slow and irregular.

Leeches, and cold affusion.

11th.—Pulse 58.

Purgatives, assafoetida, and a turpentine clyster.

13th.—A feeling of a choking in the throat, and of a ball rising there; pulse still slow, tense, and irregular.

Purgatives.

15th.—Great relief after a purging of green mucous stools.

Purgatives continued.

On the five following days he had strong fits of involuntary laughter. Sleep lethargic; tongue white; pulse 70; bowels well purged.

23d.—Spasms of the eyelids. In other respects better.

26th.—Pain in the region of the spine the only complaint. He was then cupped, and quickly cured.

Case IX. placed under apoplexy well illustrates the condition of the encephalon by which every remedy is frustrated.

Case XIII. shows the relations of epilepsy to apoplexy, and simple spasm.

CLASS II. THE SPASMODIC AFFECTIONS.

THE cases subsequently narrated show that tetanus, convulsio, chorea, hysteria, and mania, regarded as generic diseases in a nosological aspect, are connected with states of the organization which, in a pathological regard, are really different: in some cases, or in one stage of a case, the proximate cause is allied to that of an inflammatory and febrile disease; in other cases, or another stage of a case, it is similar to that of a purely nervous affection, the internal physical character of which may be either bloodlessness of the part, or a congestion of venous blood.

A most important feature of these affections is the absence of febrile symptoms when the internal state is truly of an inflammatory or highly congestive nature. This fact is impressively shown by the morbid appearances in two of the cases of mania. The pulse is not a fair criterion of the pathological condition of the disease; in some cases of active congestion it is extremely low, both during the spasmodic paroxysms and in the intervals; and in proportion as the congestion is relieved, the symptoms sometimes assume a more febrile character. This feature is particularly to be remarked in many of the cases of tetanus, chorea, and mania. In the early period of all these diseases, it is probable that a state of vascular fulness and increased momentum of the circulation in the brain or spinal chord invariably subsists; and it may subsist even in a very debilitated state of the constitution; and it is often periodical in its recurrence, and that for a very prolonged period.

The cases also shew that symptoms of a truly nervous character, and which arise from a state of the organization the opposite of inflammation, or entonic congestion, may be rapidly succeeded by symptoms that arise from the congestive state. This transition of state is sometimes a source of much embarrassment to the young practitioner. An accurate diagnosis of these pathological conditions is only to be arrived at by earnest attention to the most minute particulars of the symptoms, and of the previous treatment of the case. See Case IX. XVI.

These spasmodic affections are sel-

dom fatal. In chorea, however protracted and severe, the prognosis may generally be cheerful.

A most interesting inquiry is, how far, where there is a family predisposition to insanity, the occurrence of a spasmodic disease may be expected to give immunity from a mental disorder? It appears, so far as my observation has gone, that although epilepsy does pass into mania of the most hopeless character, yet an habitual and purely spasmodic affection does, so long as it continues to recur, tend to keep off insanity.

The treatment—Regarding it as demonstrated by a sound experience that many spasmodic cases which do not exhibit febrile symptoms are to be treated with antiphlogistic remedies, it is also to be observed that, in general, these cases do not bear bleeding to the same extent as purely inflammatory disorders; a single profuse bleeding may either induce the most frightful nervous symptoms, or so depress the vital energies as to lead in a few days to death by syncope. On the other hand, in a subject apparently by no means plethoric, these diseases will sometimes only yield to a full bleeding; and in some cases the effects of a single abstraction of blood are most gratifying: see Case VIII. Cupping seems far preferable to leeches in all the diseases of this class: see Case XIV.

I would urge on the attention of the profession the importance of a remedy which I have lately used several times with gratifying success,—a deep incision of the scalp, and allowing the wound to bleed freely. In spasmodic cases of an encephalic origin, as well as in hemiplegia and mania, when there has been either a fixed pain in the head, or a tender portion of the scalp, so that gentle percussion has induced excessive pain, or a convulsion, or an hysterical fit, my experience, so far as it has gone, has proved that the bleeding from the free incision is a far more powerful remedy than any other mode of depletion. This practice should not be confined, as formerly, to cases of disease in the pericranium, nor should it be adopted merely as a last resource in chronic affections of the brain or its membranes; or as a first step to making the enormous issue lately recommended by some distin-

guished physicians. It would, I believe, be a valuable substitute for leeches and simple arteriotomy in many severe though not protracted cases of head-affections. The relief of headache by the incision, in some of my cases, was so delightful, that "it would be preferred a hundred times to suffering the horrid pain!" The severe extent to which this mode of forming a pea-issue has been carried may bring an important measure into undeserved neglect. A purulent drain, with seventy peas in the scalp, would be intolerable to many persons who would readily submit to a cut three inches in length, and a turpentine dressing followed by an emollient poultice for a few days. My attention was recalled to this measure in the last summer by my late beloved friend, Dr. Abercrombie, who had long used it with great success in cases where, in connection with symptoms of internal disease, a portion of the scalp had become tender. I would submit, however, that it should not be restricted to such a condition, and that it might be extensively adopted as a most efficient means of local bleeding.

The great utility of mercury is strongly shewn in some of the cases of tetanus and chorea; and inunction seems the better mode of using it.

Purgatives cannot be too highly commended. The drastic, however, such as colocynth, will sometimes disappoint the practitioner; it appears, when given in large doses, to produce spasm of the colon, and thus to occasion the retention of feces in its cells. When combined with a very little henbane, or with camphor and soda, its effects are more satisfactory. Aloes, also, by its powerfully emulgent effect on the liver, has conduced to irritation of the intestines, by which the spasmodic disease has been exasperated. The croton oil, and jalap with calomel, generally answer best.

From a few observations I am led to believe that the antispasmodic power of ipecacuanha renders it worthy of more frequent use in these cases than it has obtained. Digitalis, when given incautiously, has often induced alarming nervous symptoms; it might be safely discarded from practice in these diseases. As a sedative, hydrocyanic acid seems far preferable to it.

Counter-irritation, by drains, and the

antimonial ointment, is of undoubted efficacy.

In purely nervous states, cordials in small doses do good; harm, however, seems to have been done by an immoderate use of them. In one case they certainly favoured the occurrence of tetanus; and in another they kept up the periodic recurrence of convulsions.

The extent to which laudanum may sometimes be given is well shewn in one of the cases of hysteria, which is probably as extraordinary as any on record; and in one of mania. Iodide of potassium seems well adapted to these affections; my experience of it, however, has not been sufficient to establish its utility. The efficacy of turpentine, arsenic, copper, iron, zinc, and nitrate of silver, and creasote? is too well known to require a remark; the nitrate, in my experience, has done most good when it has acted as a purgative. Electricity, in one of the cases of chorea, was of decisive benefit.

The incision of the scalp mentioned above requires an additional remark. It has been recommended by Dr. Abercrombie, and subsequently by Dr. Pritchard and others, as a step to making an issue. I am convinced, however, from its instant good effect in four cases in which I have tried it, that the benefit is in a great degree owing to the bleeding of the vessels of the part which is the seat of pain, and of an important source of irritation, and also to the relief of the tension of the scalp and the pericranium.

In all cases of spasms, with headache or lethargy, I would examine the whole of the skull by percussion; and wherever tenderness should be evinced, I would deeply scarify the part. Suppuration might also be established, by inserting lint soaked in oil of turpentine into the wound.

[To be continued.]

PERICARDITIS AFTER SCARLET-FEVER.

To the Editor of the Medical Gazette.

SIR,

DR. SOMERVILLE SCOTT ALISON, in his article on the above subject, has alluded to several authors who have not, and to some who have, treated of the disease. I wish you to allow me the favour of stating, that I drew particular

attention to this subject in a paper on Dropsy after Scarlet-Fever, which I read to the Westminster Medical Society on Dec. 7, 1839. An abstract of the paper appeared in the report of the Society in the *Lancet*, seven days later. I related thirteen cases in detail to the Society, and out of these there was well-marked pericarditis in three cases, and extensive hydrops pericardii, probably unconnected with local inflammation, in two others.

I am not surprised that Dr. Alison is unacquainted with my paper, and I chiefly write to express my dissent from his opinion that pericarditis occurs at an early period in scarlet-fever. I consider that it arises only as a consequence of the renal disease which is apt to follow scarlet-fever. I admit that the kidney is generally disordered during the first few days of the fever, and that its functions are disordered during the rheumatic swellings of the joints which sometimes accompany the eruption, or appear very soon after it; but I am of opinion that pericarditis only comes on as a consequence of that congestive disease of the kidneys in which they fail duly to separate the urea from the blood, which disease is never established till a fortnight, and generally not till about three weeks, from the commencement of the fever. Dr. Alison remarks that pericarditis is liable to follow obstructive disease of the kidneys. I have seen it do so independently of scarlet-fever: it occurred only in this manner in the cases related in my paper. I have taken notes of a great number of cases of scarlet-fever, both with and without renal sequelæ, since reading the paper in 1839; these cases tend to confirm the opinion I have expressed respecting pericarditis, and I see nothing in the three cases related by Dr. Alison to induce me to modify that opinion. The subject of the first case was not seen till near death, between two and three months after the fever; in the second case the disease certainly commenced early, but the child, on a previous occasion, had had an attack of an inflammatory nature in the left hypochondrium, and Dr. Taylor discovered hypertrophy of the heart only forty-four days after the fever commenced: I therefore conclude that there was disease of the heart in a chronic form, which was rendered acute by the scarlet-fever, as

it might have been by any thing which would excite the circulation; and so I am inclined to look on this case as an exception, tending to prove the rule I have expressed. The subject of the remaining case was not seen by Dr. A. till nine weeks after the scarlet-fever, and there is no account by any medical man of the previous illness.

There are many valuable remarks in Dr. Alison's article, and I shall look forward with interest to his promised cases of anasarca following scarlatina.

I am, sir,

Your obedient servant,

JOHN SNOW, M.D.

Frith Street, Soho Square,
Feb. 25, 1845.

CASE OF
ENCEPHALOID DISEASE OF THE
TIBIA AND SOFT PARTS.

By EDWIN HALL, M.D.*

MAY 3, 1842, was called to see Thomas, son of James H—, aged 15. He was tall, of spare habit, with dark hair and eyes, and a very fair and light complexion. Though delicate in appearance, I learned that previous to this attack he had enjoyed good health. He complained of an intense and deep-seated pain in his right leg, which was not confined to one spot, but extended from the tubercle, giving attachment to the ligamentum patellæ, half way down the shaft of that bone. The patient located the pain in the bone—said "it was sometimes on the front, sometimes on the back side of it." The limb, though slightly swelled, had a natural look and feel, and was not tender to the touch, except in one spot, of the bigness of a lime, just below the attachment of the ligamentum patellæ. No cause could be assigned for the origin of the disease farther than this, viz., the patient thought he hurt his leg sliding down hill the previous winter, and it had pained him occasionally since that time. A small opening had been made into the limb by the physician who attended him prior to my being called; but for what purpose I know not, as there was no evidence of a collection of matter or other fluid. The wound, though open, was free from discharge. As regards the general condition of the patient,

* Amer. Journ. of the Med. Sciences, Jan. 1845.

his bowels were regular, tongue clean, appetite good, and pulse but little accelerated. Not being able to determine the nature of the disease, my prescriptions were such as the symptoms indicated.

In the course of two or three weeks, it became evident that the disease was rapidly increasing, but whether it would prove to be malignant was a question as yet not easy to be determined. The limb had been gradually increasing in size, and was now somewhat discoloured. Feeling, as I supposed, a fluctuation on the anterior and external face of the limb, I made an incision into it. Nothing but a thin sanious matter was discharged, indicative of disease of the bone. A probe readily passed so far into the wound as to be felt on the opposite side of the limb. A considerable flow of blood followed the withdrawal of the probe. A few days after I made the opening, it was observed that the limb was increasing in size with more rapidity than it heretofore had done; that the edges of the wound had begun to evert and put on a fungous appearance. As soon as I observed this fungus, I apprised the parents of the malignancy of the disease, and advised amputation. But hoping against hope, they wished to defer it for a few days.

The only relief which the patient could get from the intense pain he has suffered since the commencement of the disease, was in large and often-repeated doses of morphia, and poultices made of the fresh juice of *conium maculatum*.

June 4th.—Dr. Hubbard, of Halliwell, being in town, was called in, and advised immediate amputation.

Condition of the patient at this time.

—Much emaciated; pulse 130; glands in the groin not enlarged; limb below the knee exceedingly enlarged, very elastic when percussed, and of a purple tinge. A fungus of the size of a hen's egg protrudes from the wound made a week or more before. The lymphatics running over the diseased portion, resembled in size small varicose veins, and were filled with an amber-coloured fluid.

5th.—Assisted by Drs. Tewksbury and Palmer, I amputated the thigh at its middle. The patient bore the operation remarkably well. Very little blood was lost.

After dressing the stump, we turned

our attention to the examination of the limb. On cutting into it, a large quantity of dark fluid matter escaped, in which were irregular masses of what appeared to be muscular substance in a state of disorganization. In fact, the soft parts were so entirely disorganized, for the space of six or eight inches from the attachment of the ligamentum patellæ downward, that neither muscular substance nor blood-vessels could be recognised. Removing the fluid matters above mentioned, we found deposited on the posterior face of the bone, for the space of four inches below its head, a whitish substance, without organization, and bloodless. In some places this substance was of the colour, and as soft, as the cortical substance of a recent brain. In other places it was quite firm and hard, but without that elasticity and grating, when cut, peculiar to scirrhus. Patches of this were observable on other portions of the shaft of the bone, within the confines of the disease. On the anterior and antero-external face of the bone, commencing an inch below its articular surfaces and extending down two and a half inches, we observed alterations in texture worthy of notice. A little external to the crest of the tibia was a fissure from an eighth to a quarter of an inch broad, which extended horizontally through the bone. The texture of the external lamellæ of the bone, for a considerable space about this fissure, was entirely and uniformly destroyed. It resembled a carious bone, and was quite dark-coloured. To a considerable extent around this fissure, as it traversed the bone internally, were the same alterations in texture which we have noticed externally. The specimen is in my possession.

The patient made a rapid recovery, and the stump healed kindly. During the summer he was as active as usual, and gained flesh. Still his countenance was pale and his pulse quick. Various alterative remedies were prescribed, but he received no benefit from them.

Was again called to see him, Feb. 6, 1843. He complained of pain in his right side, in the region of the liver. Bowels costive; tongue coated; pulse 130; skin dry.

Cal. and rhubarb.

7th.—Cathartic operated; no better.

Blister to the side.

8th.—More comfortable, but still complains of pain in his side.

On stripping him and measuring from the xiphoid cartilage to the dorsal vertebrae, I found the right side to be three inches larger than the left. There was a lateral curvature of the vertebral column to the left, of an inch, commencing at the fourth dorsal and terminating at the lumbar. Dull sound on percussion over the whole of the right side of the chest. Respiratory murmur inaudible. This condition of things convinced me that his former disease had re-appeared, and consequently that his case was hopeless.

10th.—Right side, measured as before, is four inches larger than the left. Dyspnœa great; some cough; expectorates; appetite good.

Ipecac. and morphia.

12th.—Cough and expectoration have ceased, but the dyspnœa remains. Cannot lie in the horizontal posture. Has some difficulty in swallowing his food, which I attribute to the pressure of this immense tumor on the œsophagus.

23d.—Patient has been getting gradually worse since last report; is now very feeble. Dyspnœa excessive. Superficial veins on the right side of the thorax enlarged. Expired suddenly in the evening.

Autopsy, twenty-three hours after death.—Assisted by Dr. M. Call, we commenced the examination by opening the abdomen. The liver lay almost wholly on the left side of the median line, as also the gall-bladder. The stomach was quite small; its pyloric orifice lay almost directly below the cardiac. The transverse and descending colon was contracted to less than half its usual size, and was very light-coloured. The other organs normal.

Thorax.—The pericardium contained four ounces of serum. The heart was healthy, but forced out of its position to the left. Removing the heart, we found the left lung so much compressed by the right, that it appeared mysterious to us how it could have performed its functions so as to have sustained life for the last three or four weeks of the patient's existence. In its substance were two tumors, one of the size of a

hen's egg, the other of the size of a walnut, and resembling, more than any thing else, coarse grained loaf sugar moistened with water. They appeared quite different from any thing observed in the other lung. No tubercles were observed in this lung. The right lung was one mass of disease. It extended down to within two inches of the right iliac crest, and filled nearly three-fourths of the whole cavity of the thorax. It was firmly adherent to the costal pleura, and resembled a lung only in shape. The division into lobes could not be traced. In the apex was a cavity containing about 8 oz. of a dark turbid fluid, little thicker than serum; cutting into the lung, the outside to the depth of an inch, more or less, was generally very light-coloured, resembling the medullary substance of the brain. The central portion was rather dark-coloured, as if stained with blood, and fibrous when torn. No blood-vessels or bronchial tubes could be found. Some parts of this mass were soft, others hard and cartilaginous. The soft parts, which were always white, when cut presented a mammillated appearance, as if the morbid matter was deposited in dilated air-cells. There was no unnatural smell about it; neither was there about the leg, which this lung precisely resembled. This morbid mass, when removed and freed from fluids and other foreign matters, weighed ten and a quarter pounds.

CASE OF

ŒDEMA OF THE GLOTTIS.

By HENRY STANHOPE ILLINGWORTH.

(For the Medical Gazette.)

JAN. 18th, 1845.—I was sent for at half-past nine in the evening, to see A. B., who was in a state of approaching suffocation.

At 1 P.M. whilst eating a hot potato, a piece stuck in the throat, which after remaining there two minutes, according to his account, but, in all probability, for a much shorter time, he was enabled to swallow; it did not produce the sensation of scalding during its arrest.

Until 5 P.M. no inconvenience was experienced; he then felt his throat "rather sore," with slight oppression in "drawing in his breath;" this increased, and at 8 o'clock he became very uneasy, and, unknown to any one,

went to bed : about 9, a fellow-servant, in passing his room, hearing some one groaning, opened the door, and found him so ill, that I was immediately sent for.

On my arrival he was propped up in bed, partly supported and partly resting on his outstretched hands; his countenance was anxious and livid; his eyes suffused; his pulse very small, quick, and irregular, with inability to speak or swallow; inspiration, which was performed with a loud hoarse wheeze or stertor at long intervals, was followed by expiration attended with a suffocative effort to cough: having struggled with this for some seconds, a little glairy viscid mucus was got rid of, and renewed attempts at inspiration, more distressing than the former, took place.

Twelve leeches were applied to the throat, and ten grains of calomel smeared on the tongue. He was partially relieved before the leeches (which bled very freely) came off, breathing with less difficulty, and was able by a strong effort at swallowing to clear the calomel from the tongue; he also intimated, in a low whisper, that he was "better." On examining the fauces only a slight blush was perceptible on the velum palati, and a little fulness of the right tonsil.

A bladder of pounded ice was secured round the throat. Until nearly eleven, he continued to improve, the face partly assuming its natural appearance, and the pulse becoming fuller and slower: he was able to swallow a few teaspoonfuls of liquid. At this time a violent fit of coughing ensued, which fatigued him very much, and the symptoms became nearly as alarming as when I was first called to him. Mr. Moore now saw him, and as we feared bronchotomy might be momentarily required from an attack of spasm occurring, Mr. Cæsar Hawkins was called in a little before twelve o'clock. It was agreed to bleed him, and on twelve ounces of blood being taken from a large orifice, fainting supervened, on recovering from which he was able to express himself relieved, and could lie down; five grains of calomel were given, and an attendant who remained with him all night was to administer part of a mixture of sulphate of magnesia and mint water, according to his power of deglutition.

19th, 8 A.M.—He had passed a restless night, and as he had not been able to take much of the medicine, the bowels had not acted; respiration was still performed with considerable embarrassment. In consultation at ten o'clock, ten leeches were prescribed, and the bleeding to be encouraged by a bread-and-water poultice.

Haut. Salin. c. Liq. Antim. Tart. et Magnes. Sulph. quartis horis sumend.

2 P.M.—Much better.

10 P.M.—Very much improved, bowels much relaxed.

20th.—Going on well; after this nothing unusual occurred, and in an ordinary period he was cured.

I have a three-fold object in drawing attention to this case. Firstly: had it not been for the fortunate circumstance of some one passing his room, he might have remained undiscovered for some hours, when, most likely, he would have been found dead. "Instances have come to our knowledge," Dr. Cheyne writes, in speaking of laryngitis, "in which the disease has terminated fatally within twelve hours, (one of Dr. Armstrong's patients died in eight hours, and another in seven;) and, therefore, if a person dies suddenly in the night, who had complained on the foregoing day of sore throat, laryngitis may be suspected as the cause of his death."* There was no sore-throat complained of on the preceding day, no one being aware that he was ill; we should consequently have had not a little difficulty in accounting for the cause of death, as there was not even this symptom to guide us in our inquiries.

Secondly: the period of the super-vention of the symptoms is curious: four hours previously to their commencement a hot potatoe had been fixed in the throat, without any pain, or dyspnoea, arising for this length of time. In four cases of swallowing boiling water, related by Dr. Marshall Hall, which are in some respects analogous to this, difficulty of breathing appears to have begun directly after the accident.†

Thirdly: the marked mitigation of

* Cyclop. Pract. Med. vol. iii. p. 19.

† Underwood on the Diseases of Children, 9th edit. p. 364.

the symptoms from the treatment first adopted, shown in the improvement of the breathing and loss of lividity, and their return after a period of some duration, is worthy of recollection.

1, Arlington Street,
Feb. 17, 1845.

BAKER VERSUS LOWE.

To the Editor of the Medical Gazette.

SIR,

YOUR readers are already acquainted with the particulars of the action raised by Mr. Baker, of Hampton, against Captain Lowe for the recovery of his just dues, which was decided in favour of Mr. Baker in the Court of Queen's Bench on Saturday, the 15th inst. Though much indisposed to comment on the conduct of professional men, the circumstances of this case are such as to have roused my indignation.—It does, indeed, seem monstrous, that there should be found any member of the medical profession ready to come forward, with the will and purpose, and for hire, to put a fellow-practitioner in the wrong!

Captain Lowe's disease was spontaneous or senile gangrene of the great toe; and Mr. Baker treated his patient on the stimulating plan: the disease spread, and the Captain finally lost his foot, which was taken off by Mr. Liston. I am old enough to remember when the principle in surgery, in regard to senile gangrene, was—warm turpentine dressings to the part affected, and porter, and wine, and nourishing food, with the free use of opium internally. Of late years another view has been taken of the matter, and patients affected with senile gangrene have had poultices and soothing topical applications, together with a restricted regimen and anodynes, prescribed for them. The old plan of treatment was not always unsuccessful, any more than is the later mode of procedure constantly successful, in arresting the disease. I have seen spontaneous gangrene cease to make progress under beef-steaks and London porter to the stomach, and hot spirits of turpentine to the mortified toe; and I have known the disease continue its destructive course under the most soothing local applications, and chicken-

broth and panada as aliment; and I will venture to say, so have Mr. Lawrence, and Mr. Key, and Mr. Skey. Nevertheless, these gentlemen all gave their evidence in such a way as to lead to the conclusion, that had Mr. Baker followed another plan of treatment—the plan which they approved—Captain Lowe would not have lost his foot. They ought rather, in my opinion, as being familiar with the dangerous and generally uncontrollable character of senile gangrene, to have been found ready to throw the weight of their name and authority into Mr. Baker's scale: instead of making themselves partizans in the case, and doing all in their power to crush him, their true and proper place was certainly by his side, and upholding him. These gentlemen ought, in fact, to have seen this Captain Lowe as a shabby fellow—one who was but too ready to receive Mr. Baker's care and attentions whilst they could be of use to him, without a word about want of skill; it was only when the question came to be of payment, of rewarding Mr. Baker for his visits innumerable, and his attentions without end, that Captain Lowe started the objection of want of skill on the part of his kind attendant, and cruelly and recklessly refused to pay, on grounds that were calculated to ruin in public estimation the man who had been so unwearied in his attendance on him. That the whole affair hung on the *indisposition to pay* was made abundantly manifest by the treatment which Mr. Liston received; inasmuch as that gentleman received merely half his fee,—thirty, instead of sixty guineas, for some four or five visits as far as Hampton. Captain Lowe could not urge want of skill against Mr. Liston, but pleaded poverty, and tendered him but half his fair recompense. Yet it came out in the evidence that this Captain Lowe was living in retirement, not only knowing nothing of the *res angustæ domi*, but actually in circumstances which permitted him to keep a hunting stud for his son! The son of this captain, who, it might be fairly said, kept back from one of his surgeons half his fee, and attempted to trick the other, ruining his character as a professional man at the same time—the son of this man hunted twice or thrice a week!

Had Mr. Baker been unquestionably

mistaken in his practice, (and there is not the slightest reason to suspect that the result would have been other than it was, had different measures been taken from the first) I still maintain that it was neither fair nor seemly in any of his professional brethren to come forward against him: there was no principle of public justice involved in Mr. Baker's procedure. Had Captain Lowe died of senile gangrene, as he happily recovered, is it not notorious that the disease is little under the control of treatment of any kind? Let us see what Mr. Lawrence himself says on the subject: "Very commonly," says that gentleman, "from the part at which it begins, it extends further; so that generally, when you see an occurrence of the kind, you will find that the patient will die from it, although the mortification in the first instance should appear very slight."* But, supposing Mr. Baker to have been palpably wrong, we ask—Do mistakes never occur in the practice of hospital surgeons? have not tumors sprouting from bones been mistaken for aneurisms, and such counsel given as led to the ligation of large vessels, with no less a consequence than loss of life to the patient? Has not a trifling degree of wry-neck, dependent on original conformation of the skeleton, been mistaken for wry-neck induced by contraction of the muscles of the neck, and perseverance in subcutaneous sections in such a case been followed by inflammation and fever, and death; so that the young woman who had left her home one week full of life and hope, was carried back the next, a senseless corpse in her coffin? Shame! shame upon us! that we should be found ready at the bidding of any scurvy wretch who would keep the money in his pocket, to attempt to prove one another in the wrong!

I remain, sir,

A CONSTANT READER.

Feb. 28, 1845.

BOARDS OF GUARDIANS AND DISTRICT MEDICAL OFFICERS.

To the Editor of the Medical Gazette.

SIR,

THE following cases (with others) have lately been the subjects of public

* Lectures in *Lancet*, 1829-30, vol. i. p. 425 et seq.

investigation before the Board of Guardians relative to the neglect of the district medical officers, in which I was summoned as the medical evidence. My treatment having been very extensively and illiberally canvassed, in addition to personal insult, I shall be particularly obliged by your inserting the subjoined in your valuable periodical as early as convenient.

Jan. 15, 1845.—About 8 o'clock in the evening, I (as the nearest surgeon) was called to the wife of David Fleming, labourer, of Rond. Upon my arrival I found the woman (as stated in my evidence) "all but dead," lying upon her back: blanched countenance, cold extremities, pulseless at wrist, the heart acting very feebly, &c, the effects of severe uterine hæmorrhage attendant upon an abortion between the third and fourth month (near the latter). Upon examination, I found the fœtus had escaped, the placenta partially detached, the remainder morbidly adherent, no uterine action, hæmorrhage still continuing. I gave a draught of Ammon. c. Pulv. Secale Cornut., ordered warmth to the extremities, from time to time supported her with brandy and water, and proceeded to extract the placenta by holding the fundus uteri with my left hand just over the pubis, for the double purpose of steadiness and pressure, and, with the fore-finger of my right, endeavoured to detach the placenta, which, with the aid of my middle finger, I, with much difficulty, ultimately did, *in several pieces*, many not larger than the top of my finger. I then applied pressure by a compress and bandage, put her into bed, continued the warmth and stimulus, waited a long time, gave an opiate, and, when I could safely do so, left her. I have fortunately since had the after-treatment of the case, which consisted in supporting her by wine and nourishment, and giving her Tinct. Opii c. Tinct. Ferri Hydrochlor. and attending to the secretions, under which the woman has progressed favourably, though still suffering from debility.

In this case, during the investigation I was personally, and, I contend, most unjustifiably, insulted by the district medical officers (Messrs. ———), declaring that "they did not believe that the woman had miscarried at all" (although other evidence than mine fully proved that fact), and inquired of

me "whether I had ever before attended an abortion?" This will doubtless meet the eyes of many of my hospital friends, who, during my sojourn among them, designated me "the midwifery man;" and I have the *decus et tutamen* of holding the honorary certificate of my justly-respected, and highly esteemed friend and instructor, Dr. F. H. Ramsbotham, for "the great number of cases of difficulty and danger I attended whilst one of the accoucheurs attached to the Tower Hamlets Dispensary as a medical student at the London Hospital"; my brother students, when any such occurred, kindly sending for me to assist. I would not, however, for an instant let it be thought that I am presumptuous enough to arrogate to myself a greater amount of obstetric knowledge than ought to be possessed by every practitioner. Again, it was urged "that I ought to have waited; had I done so, the placenta would have been spontaneously expelled:" or else "I ought to have used the plug"—that being the practice they (the medical officers) would have adopted. To which I replied, "then you would have killed the woman;" as, first, far too much time had elapsed prior to assistance being procured; and the placenta itself, or rather a large portion of it, was so very "morbidly adherent"—a term much cavilled at, but which I submit is correct—that there was very little probability, if any, of its being spontaneously expelled; there being no uterine action, and the extent and strength of the adhesion being, I contend, proved by the extraction in many small pieces; as I much question the possibility of any man being able to do in the absence of all uterine contraction, irregular or otherwise, unless the placenta be morbidly adherent. And secondly, relative to the use of the tampon: having seen it adopted in several cases, in some, I think, with absolute disadvantage, the women, in three or four instances, having gone into a state of collapse from internal hæmorrhage, though not a drop flowed externally. I therefore by no means should have felt myself justified in exposing my patient to a risk which, had it occurred, must have proved fatal to her under the before-detailed extreme circumstances.

The second case is that of Benjamin Cheverton, labourer, of Rond, to whom I was called March 12th, 1844, a gravel-pit having foundered upon him, whereby he sustained dislocation of the ankle-joint, with fracture (as usual) of the malleolus internus. I reduced the dislocation, and replaced the fractured portion of bone, then placed the limb on the outside (thigh and leg flexed) with a splint, upon a pillow: my object in placing the limb in the flexed position was the relaxation of all the muscles, and more particularly the flexor longus, digitalis perforans, and tibialis posticus, the tendons of which muscles, as every surgeon knows, pass round the inner ankle, which in this case was completely fractured off. I attended the case a day or two, when one of the district medical officers (not a surgeon), Mr. H—T— took charge of the case. He then made some very unjust and illiberal observations as to my incompetency to reduce a dislocation, or set a fracture, said that my treatment was all wrong, and placed the limb in the extended position, upon Macintyre's apparatus, which he fastened to the bedstead, tightly bandaging the limb upon it, in which position he kept it for three weeks of (in my opinion) invaluable time, as regarded the integrity of the joint, during which time, upon each removal of the bandage, the fractured malleolus was always found considerably displaced. At the expiration of this period, the precise position and treatment which I in the first instance had recourse to was re-adopted; the poor fellow suffering for a long time from extensive sloughing of the sole of the foot, the probable cause of which it is not for me to say—whether the tight bandaging might have given rise to it "is a matter altogether of opinion." Suffice it to say, that in the after treatment no strapping (and but a modification of a bandage), nor passive motion, &c. was employed, and now the man has ankylosis of the ankle-joint, with considerable displacement of the malleol. intern.; in short, he is a cripple for life.

I really fear, Mr. Editor, that I have too much trespassed upon your valuable space. I have been as brief as possible, consistent with accurate detail, but as the affair does not alone involve my personal interest, (as also from its having

been publicly investigated) I trust you will excuse the length, and give it early insertion.

I have the honour to be, sir,

Respectfully yours,

J. J. E. PORTER, Surgeon, &c.

Godshall, Isle of Wight,
Feb. 28, 1845.

ANALYSES AND NOTICES OF BOOKS.

“L’auteur se tue à allonger ce que le lecteur se tue à abrégé.”—D’ALEMBERT.

Anatomical and Pathological Observations. By JOHN GOODSIR, F.R.S.E., Demonstrator of Anatomy in the University of Edinburgh, and HARRY D. S. GOODSIR, M.W.S., Conservator of the Museum of the Royal College of Surgeons. Edinburgh: Myles Macphail. London: Simpkin, Marshall, and Co.

THE College of Surgeons of Edinburgh are fortunate in having secured the services of two such able observers in physiology and pathology, as the Messrs. Goodsir.

The present work comprises the following subjects:—centres of nutrition;—the structure and functions of the intestinal villi;—absorption, ulceration, and the structures engaged in these processes; the process of ulceration in articular cartilage; secreting structures; serous membranes; structure of lymphatic glands; structure of the human placenta; structure and economy of bone; besides some anatomical, zoological, and pathological observations, confirmatory of the centres of nutrition and of secretion.

By centres of nutrition are understood certain minute cellular parts existing in the textures and organs. They are, accordingly, of two kinds: those which are peculiar to the textures, and those which belong to the organs. Those of the former are generally permanent, while those in the latter are, in most instances, peculiar to their embryonic stage, and, either disappear, or break up into the various centres of the textures of which the organs are composed:—

“A nutritive centre, anatomically considered, is merely a cell, the nucleus of which is the permanent source of successive broods of young cells, which from time to time fill the cavity of their

parent, and carrying with them the cell-wall of the parent, pass off in certain directions, and under various forms, according to the texture or organ of which their parent forms a part.

“There is one form in which nutritive centres are arranged, both in healthy and morbid parts, which is frequently alluded to in the following chapters, and which may be named a germinal membrane. In a germinal membrane, the nutritive or germinal centres are arranged at equal or variable distances, and in certain directions, in the substance of a fine transparent membrane. A germinal membrane is occasionally found to break up into portions of equal size, each of which contains one of the germinal centres. From this it is perceived, that a germinal membrane consists of cells, with their cavities flattened, so that their walls form the membrane, by cohering at their edges, and their nuclei remain in its substance as the germinal centres.

“Germinal membranes are only met with on the free surfaces of parts or organs. One surface of the membrane is therefore attached, and is applied upon a layer of areolar texture, intermixed with a more or less rich network of capillary vessels. The other surface is free, and it is on it only that the developed or secondary cells of its germinal spots are attached. These secondary cells are at first contained between the two layers of the membrane, these layers being the opposite walls of each of its component cells. When fully developed, the secondary cells carry forward the anterior layer, which is always the thinnest, leaving the nuclei or germinal centres in the substance of the posterior layer, in close contact with the blood-vessels.”

In describing the intestinal villi, some very clear and interesting observations are made in regard to digestion: Mr. J. Goodsir is led to believe that absorption by growth and solution is the process which actually takes place. Hence “the vesicular extremity, like the spongiole of the root fibril, is the primitive nutritive centre of the villus. The villus originates in a cell. During the development of the villus, this spot or cell was employed only in procuring materials for the growth of the organ. In the perfect animal the formative function of the spot ceases; its action becomes periodical, active during di-

gestion, at rest during the intervals of that process. The same function is performed, the same force is in action, and the same organ, the cell, is provided for absorption of alimentary matters in the embryo and in the adult, in the plant and in the animal. The spongioles of the root, the vesicles of the villus, the last layer of cells on the internal membrane of the included yolk, or the cells which cover the vasa lutea of the dependent yolk, and the cells which cover the tufts of the placenta, are the parts of the organism in which the alimentary matters first form a part of that organism, and undergo the first steps of the organizing process."

The following are his views with reference to ulceration:—

"A rapidly extending ulcerated surface appears as if the textures were scooped out by a sharp instrument. The textures are separated from the external medium by a thin film. This film is cellular in its constitution, and so far it is analogous to the epidermis or epithelium. It is a peculiarly endowed cellular layer, which takes up progressively the place of the subjacent textures, these being prepared for dissolution, either by the state of the system, the condition of the part, or by some influence induced by the contiguity of the new formation. Carrying out, therefore, the principles at present regarded as regulating the reciprocal functions of textures and vessels, the subjacent textures disappear in consequence of a disturbance of their own forces, consequent upon the appearance of new forces residing in the cellular layer. The disturbance and gradual annihilation of the natural forces residing in the subjacent textures is indicated by the gradual disappearance of these. That new forces, not formerly existing in the part, are developed, appears from the formation of the cells of the cellular layer. As these appear in rapid succession, and disappear as rapidly, the subjacent textures also disappear, either by previous solution and subsequent absorption by the properties and powers of the former; or under the peculiar circumstances of inflammatory action by the more vigorous growth of the former, monopolizing the resources of the part, the latter dissolving and disappearing by the usual channels of the returning

circulation, more rapidly, but according to ordinary laws."

At page 83 a curious mistake is pointed out into which Mr. Erasmus Wilson has fallen as regards the *echinococcus hominis*. There can be no doubt, according to our authors, that the *echinococcus* described by Mr. Wilson in a paper read before the Royal Medical and Chirurgical Society, and of which an abstract was published in the *MEDICAL GAZETTE* for 1844, is of one and the same species with the *Acephalocystis armatus*. The bodies defined as the echinococci, and which are attached to the internal surface of the membrane, are merely the young acephalocysts either of the secondary or tertiary stages of development; secondary, if found growing from the walls of the original containing sac. The animal is therefore an acephalocyst, and not an echinococcus.

A spirit of minute and accurate research characterises the whole series of observations.

Elements of Physics. By C. F. PESCHEL, Principal of the Royal Military College at Dresden, and translated from the German, with Notes, by E. WEST. Illustrated with diagrams and woodcuts. Part I. *Ponderable Bodies*. 12mo. pp. 307.

A CENTURY and a half has elapsed since Natural Philosophy, in its extended sense, as the study of the mechanical phenomena of the universe, was deemed an indispensable attainment by the medical man, who originally obtained the title physician, from his acquaintance with the principles of physics.

About the above period, the mathematical sect, which had originated with Borelli, was illustrated by Harvey, and systematized by Bellini, expired with Pitcairn, Mead, and Friend. Borelli's explanation of the muscular movements, a series of mathematical propositions, is replete with scientific truth, and may be studied by the anatomical physiologist at the present day with advantage. Though this mechanical school of medicine has been long justly exploded, it is notwithstanding incumbent upon every student who is ambitious of becoming an accomplished physician to make himself familiar with the laws of nature that govern the material elements which exercise

incessant influences on the living frame. The little work of Peschel affords a convenient manual to medical men for learning the principles of this important preliminary science. The part now published, under the title *Ponderable Bodies*, treats of what other writers would style statics and dynamics. For instance, after an introductory section on the physical properties of bodies, physical forces in general, molecular attractions, and gravitation, he discusses, in section 2, the laws of motion in general, including gravity, descent on inclined planes, projectiles, motion round a centre, &c. In the 3d section, the doctrines of the pendulum, and the mechanical powers, are treated of, under the singular title of *Solid Bodies*. The sections on non-elastic and elastic fluids will probably be found to be the most interesting by the medical world. Vibrations and acoustics constitute the subjects of the 6th and 7th, or last, section.

MEDICAL GAZETTE.

Friday, March 7, 1845.

"Licet omnibus, licet etiam mihi, dignitatem Artis Medice tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

THE FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

It was proposed in the draught of the bill of last session to associate the Faculty of Physicians and Surgeons of Glasgow with the University of that city, in examining for the degrees of bachelor and doctor of medicine. The faculty was to be styled the Royal College of Physicians and Surgeons of Glasgow. The proposition was made in the belief that the said faculty had in the four adjacent counties power to license practitioners in medicine as well as in surgery, which is not the fact. Sir James Graham therefore thinks it on the whole better to withdraw that provision, and to give the sole power of licensing, so far as Scotland is con-

cerned, to the Colleges of Physicians and Surgeons in Edinburgh.

The right and privilege of examining and licensing practitioners in surgery and pharmacy, was conferred upon the faculty by Royal Charter upwards of two hundred years ago, secured to them afterwards by acts of the Scottish Parliament, and very recently by decisions of the House of Lords.

We believe that no just complaint has ever been urged of their having exercised in an improper manner the power thus granted to them. On the contrary, their constant aim has been to benefit the public, and to raise the status and character of the medical profession to the utmost of their ability. The curriculum of study, they maintain,* has always been as full and complete, and the examinations as strict, as those of any other licensing body in the kingdom. This ancient and respectable corporation, we may add, possesses a spacious hall, a valuable and extensive library, and a well endowed fund for the support of the widows and orphans of its members.

We therefore regard the intended withdrawal of its privilege as a serious hardship, fraught with most hazardous consequences to the medical school of Glasgow, inasmuch as it may be naturally supposed that students will hereafter resort chiefly to those places for medical education where they can likewise obtain the license to practise.

We are, moreover, disposed to doubt whether the contemplated act, originating, it is said, in Irish jealousy, be not in some respect an infringement of the Treaty of Union between the two kingdoms. It is there stated that no alteration should be made in laws which concerned private right, except for evident utility of the subjects within Scotland. Now it is undeniable that the peculiar privilege in question

* Memorial of December, 1844.

was held by the Faculty of Physicians and Surgeons long anterior to the year 1707, the date of the Union; and we would humbly suggest whether its abrogation be not more likely to prove a source of detriment than advantage to one of the most important cities of the empire. Glasgow has a population of 300,000, which is rapidly increasing. It is the seat of a famous university, and of a long-established school of medicine. It has a general hospital, containing nearly 500 beds, in which, during the last fourteen years, 3,500 patients have been treated annually, and where, for a considerable time past, clinical instructions in medicine and surgery have been regularly given to a large concourse of students. There are other smaller hospitals, and numerous dispensaries for the cure of the sick and diseased poor. Glasgow has an extensive and flourishing sea-port, and being situate in the centre of mining, manufacturing, and mechanical works of great magnitude and variety, serious accidents are daily occurring which call for the most prompt and skilful appliances of surgery. Hence ample opportunities are afforded the student of acquiring a thorough and practical knowledge of his profession.

On the grounds, therefore, of long undisturbed tenure on the one hand, and of probable detriment to the community on the other, do we argue against the proposed withdrawal of their license from the Faculty of Physicians and Surgeons of Glasgow.

To the objection that this faculty is an anomalous body, composed of the two classes united, we attach no weight.

If it has been deemed expedient to make a special provision in favour of Oxford and Cambridge, "those twins of learning," where medicine heretofore has been confessedly taught in a very loose and incomplete manner, why not

do something of the same kind for Glasgow? Might not an assessor be sent thither at stated periods from the College of Surgeons of Edinburgh, invested with the power of licensing practitioners in medicine and surgery, conjointly with the examiners of the above faculty, since it is only in so far as general practitioners are concerned that their authority extends? In this point of view, the circumstance of their being a mixed constituency, made up of physicians and surgeons, should rather operate beneficially than otherwise. The necessary elements already exist for furnishing a suitable board to examine and license the candidate in physic and surgery. Of course it would be incumbent on the assessor to see that the curriculum, and other requisitions enjoined by the Council of Health, were rigorously observed.

From the contemplated changes we anticipate nothing short of a rapid and irremediable decline of the medical school of Glasgow. The regius professor of surgery is, we perceive, to be a member of the Council of Health. Should our gloomy forebodings be realized, he will, no doubt, find ample time for fulfilling in person the duties of his metropolitan appointment.

This, however, is no light matter. On the contrary, it is one entitled to the deepest thought. We therefore trust that the legislature, before taking any decided step, will weigh well the probable consequences which may result from annihilating the existence of so useful a body as the Faculty of Physicians and Surgeons of Glasgow. The spirit of common justice opposes its being thus immolated, while other institutions, more influential it is true, though not a whit more deserving of consideration, are still to be upheld in their special rights and immunities.

HINTS TO MEDICAL JOURNALISTS.

LONDON has three weekly medical journals, conducted with great ability, viz: "*The London Medical Gazette*," "*the London Lancet*," and the "*London Times*." Of these, the two latter occupy antagonist positions, and may be said to represent opposite parties or factions of the profession in that metropolis. Accordingly, we find, mixed up with much valuable matter, a large amount of a different stamp—very interesting, no doubt, to the physicians and surgeons of London, but about as much so to us in the United States, as our Corporation, County and State politics, are to our brethren on the other side of the Atlantic. The discussions on "Sir James Graham's Bill," "Medical Reform," the fitness or unfitness of the last appointment at St. Bartholomew's, St. Thomas's, at Guy's, "Movement of the Profession," "Great meeting at Leeds," "at Manchester," &c. &c., with many other things proper to London, are all very well in their place, but to American physicians they are nearly as cabalistic as "the secret science of the Jews."—*Philadelphia Examiner*.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Tuesday, February 25th, 1845.

MR. STANLEY, President, in the Chair.

On the Mortality in Prisons, and the Diseases most frequently fatal to Prisoners.

By WILLIAM BALY, M.D. Physician to Millbank Prison, and Lecturer on Forensic Medicine at St. Bartholomew's Hospital.

THIS paper, of which only an abstract was read, contains the results of an inquiry into the rate of mortality, and the nature of the more prevalent diseases in the Millbank Penitentiary, and other penal establishments, during the last fifteen or twenty years.

The annual rate of mortality in the different prisons of England, calculated from the average number of prisoners, and the number of deaths, exclusive of the deaths from Asiatic cholera, has ranged from 15½ per thousand to nearly 39 per thousand; in the state prisons, or penitentiaries, of the United States, from 19 to 39 per thousand; and in Switzerland from 25 to 35 per thousand. In France, the mortality, including deaths from Asiatic cholera, has ranged, in the hulks, from 39½ to 55½ per thousand,

and in the Maisons de Force et de Correction from 30½ to nearly 87 per thousand.

The annual rate of mortality amongst persons at liberty, in the different countries and cities in which these prisons are situated, and at the periods of life of prisoners, has varied very little from 15 per thousand.

The excess of mortality has been much greater in some prisons than in others; but the amount of this excess of mortality is no measure of the degree in which the health of the prisoners is affected by the discipline, diet, and general arrangements to which they are subjected, since there are many circumstances, independent of all systems of prison discipline and internal prison arrangements, which greatly affect the number of deaths occurring in prisons. The most important of these circumstances are, 1st, the extent to which the practice is carried of granting pardon to convicts in failing health; 2d, the degree of predisposition to disease of the class of persons forming the population of the prison; 3d, the length of confinement which the prisoners undergo; and 4th, their liability to endemic and epidemic diseases owing to the situation of the prison.

The high rate of mortality which prisoners suffer is really the effect of their punishment, and is not owing to the unhealthiness of the class whence criminals are, for the most part, derived. This is proved by the increased mortality which attends an increased duration of imprisonment, and by the result of comparing the rates of mortality in English prisons with the rates of mortality of the population of Liverpool, the most unhealthy town in England. The mortality of persons of the ages of 15 to 70, in Liverpool, during 1841, was 18 per thousand living. But the annual ratio of deaths amongst the prisoners in the county prisons of England has been nearly 23 per thousand; amongst those confined in the Millbank Penitentiary at all periods of imprisonment, nearly 31 per thousand; and amongst those passing through the third year of their confinement in that institution, more than 52 per thousand.

In America, France, and Switzerland, as well as in England, the proportion of deaths occurring annually has been much greater amongst criminals in prisons than amongst persons of a corresponding class of society out of prison.

The diseases to which this increased rate of mortality has been chiefly due in the Millbank Penitentiary, and all prisons where criminals are confined for long periods, are the various forms of tubercular scrofula, and especially tubercular phthisis. No other class of diseases has produced uniformly in all prisons a higher ratio of deaths, than the same class of diseases causes amongst persons at liberty; whilst the mortality from

many diseases is less in prisons than amongst the free population. Even where endemic diseases have been prevalent, owing to the unhealthy site of the prison, the great excess of mortality has still been caused by tubercular diseases.

The causes which have rendered tubercular disease so frequent and so fatal in prisons are, in the author's opinion—1st, deficient ventilation; 2d, cold; 3d, sedentary occupations, and want of active bodily exercise; 4th, a listless, if not dejected state of mind; and 5th, poorness of the diet.

The diet in the Millbank Penitentiary, and in the American prisons, has been more abundant than that of the agricultural labourer. But, in many other prisons, the allowance of food has been very scanty.

In respect of the diet, and also of the ventilation and warming, a great improvement has recently been made in the prisons of England, and it is to be expected that after the lapse of a few years a great amelioration will be found to have taken place in the health of prisoners.

Dr. Webster, without expressing his concurrence in all the opinions now promulgated, agreed with the author respecting the effects produced upon prisoners when only confined for a short period, who often left the prison in an improved state of health, compared with their previous condition. This fact had been generally observed in gaols, and he would, in confirmation of that opinion, refer to the results met with during the last two years at the City Bridewell, as he could speak on the subject from personal knowledge. The Fellows, of course, knew that the persons committed to this prison were dissolute and depraved characters, who had been exposed to the inclemencies of the weather, and often to the want of food; nevertheless, most of them leave the prison in better condition than at their committal. The period of confinement varies from a few days to three months, the average length being thirty days. To prove that the health of the City Bridewell prisoners is not deteriorated by their confinement, he (Dr. W.) would remark, that during 1843, when the committals were upwards of 1,000, only sixteen infirmary cases occurred, and one death; whilst in 1844, when the numbers committed amounted to nearly 1,150, there was only one death during the year, and twenty-four infirmary cases, most of them being trifling complaints. Properly speaking, even the single death recorded ought not to be ascribed to the prison discipline, since the patient remained fourteen days in Bridewell, and was an old vagrant, who laboured under fever at his committal, and had suffered much from misery and destitution. Long confinement often injures

the health of prisoners, but short periods frequently prove advantageous, as shewn by Dr. Baly's observations. He (Dr. W.) also agreed with the author as to the frequency of phthisis and bowel complaints; indeed, at the Penitentiary, consumption seemed lately to have been the most fatal disease amongst the inmates. The parliamentary report for 1844 stated that of the eleven deaths met with in that prison during the previous year, seven were from phthisis; at the same time, amongst the fourteen criminals pardoned on account of impaired bodily health, the majority were affected with pectoral disease, seven being phthisis, and one pleurisy. Again, in 1842, epidemic dysentery was very prevalent in the Penitentiary, when nine deaths occurred from that disease. He made these remarks on purpose to ascertain whether the author coincided with him that the mode of ventilating and warming prisons usually employed materially contributed to increase pectoral diseases amongst the inmates. The breathing of hot dry air irritates the mucous membrane of the lungs, produces cough, and, according to his (Dr. W.'s) opinion, in addition to the mental depression of prisoners, this dry and overheated atmosphere tended to bring on consumption, especially in those predisposed to that complaint. Besides local causes, the food consumed had, he thought, much influence on the production of bowel complaints, particularly the frequent use of liquid food, such as pea-soup; perhaps Dr. Baly would state his views to the Society on these points. Although the author, in the abstract of his paper, had only alluded to the bodily diseases affecting the Penitentiary inmates, there was another question of equal importance, to which he (Dr. W.) would wish to direct attention, in order to learn from Dr. Baly how far the mental condition of the criminals was affected by the discipline and seclusion of the prison, when they were placed in solitary confinement. This was an important subject, and one which had recently occupied the attention of philanthropists and medical men in this country, as also in France and America. Dr. Baly might feel unwilling to reply to such questions, as he held a public appointment under government; but he (Dr. W.) being differently situated, considered it would not be out of place to mention, in a medical society like the present, a few facts illustrative of the influence which solitary confinement produced, from the records of the prison to which Dr. Baly is attached. In 1839, according to parliamentary reports, three insane patients were sent from the Penitentiary to an asylum; five in 1840, or, taking the eighteen months prior to July, 1841, when the solitary system was strictly enforced, fifteen persons

became insane ; whereas, during the subsequent eighteen months—that is, when an important modification took place in the prison discipline—five insane criminals were removed, and only two during the year embraced in the report of 1844. This remarkable diminution in the number of Penitentiary inmates transferred to a lunatic asylum is conclusive on the subject, as it occurred subsequent to the period when the prohibition to intercourse was limited to three months after admission, the prisoners being then permitted to converse with two or three other prisoners during the hours of exercise, attention being, however, paid to the age, the disposition, and offences of the criminals thus allowed to associate together. Stronger evidence cannot be adduced respecting the effects which solitary confinement exerts upon the minds of ignorant or depraved individuals, than the facts just stated. He (Dr. W.) entertained strong opinions upon this question, and considered no punishment so severe to a living human being as long-continued seclusion from the company of his fellow creatures, especially to uneducated individuals, often devoid, not only of any good principles to fall back upon during their solitude, but who were, instead, frequently the slaves of their own evil passions.

Dr. Baly observed that his paper had reference simply to the effect of imprisonment on the body, and he therefore should refrain from answering Dr Webster's question in reference to the effect of solitary confinement on the mind. In regard to the influence of heated air in the production of phthisis, in the Penitentiary, cold appeared to have the most injurious influence on the prisoners. He could not trace the production of phthisis to hot air. Facts were, however, he believed, on record, to shew that hot air was injurious, although, as yet, he was aware of no information from any prison which warranted a belief that it caused phthisis. With respect to diarrhoea and dysentery, he felt convinced, when these diseases were prevalent for any lengthened period, that they were not produced by the kind of food which had been taken, but owed their origin to some peculiarity of the locality in which the prison was situated. Liquid and poor diet, though they would not originate, nevertheless aggravated these diseases. He had, in his paper, mentioned mental depression as one of the causes of bodily disease, and this depression, of course, would be increased by solitary confinement.

Dr. Webster did not refer the occurrence of phthisis to the influence of hot air, but it might produce other chest affections, as bronchitis, which would terminate in phthisis.

Dr. James Johnson referred to the curious fact stated in the paper, that the mortality

in prisons always lessened after the fourth year, and inquired if any cause could be assigned for this circumstance ?

Dr. Baly observed, that it was a fact, that the mortality in the Penitentiary was less in the fifth than the fourth year. It had been noticed, also, in the Eastern Penitentiary of America, that this circumstance obtained ; and in this institution, also, there was less mortality in the fourth than in the third year. He explained this by the fact that those prisoners who were liable to be affected with scrofula fell a victim to that disease before the termination of the fourth year. Those who survived that period were not liable to be thus diseased.

Dr. Cursham inquired how long a time it required for scrofula to develop itself in those prisoners in whom there was no trace of the disease previous to their admission into the Penitentiary ?

Dr. Baly replied that scrofula began to develop itself in the second six months' imprisonment, and increased in severity during the next eighteen months. He possessed only a limited number of facts in regard to this question, but it would appear that the disease gradually declined after the second year of its existence.

Mr. Bransby Cooper inquired what was meant by scrofula, in the paper of Dr. Baly. The term was so indefinite that he wished to know in what way it was employed.

Dr. Baly, in the abstract, had referred tuberculous scrofula to imprisonment. He considered this disease to consist of a deposit of tuberculous matter in the lymphatic glands, the serous membranes, or any organ of the body.

Mr. Bossy, in reference to the inquiry of Mr. B. Cooper, remarked, that Dr. Baly had correctly described the scrofula developed by imprisonment as tubercular cachexy. It shewed itself by paleness, weakness, and general debility of the frame ; and these were so marked that he (Mr. B.) could, in examining a number of men, easily determine which of them had been subjected to imprisonment. Dr. Webster had remarked, that short imprisonment appeared to have a beneficial influence upon health, and this was apparently the case, for, from want of exercise, and the use of fluid diet, there would be an increase of fat. He had found, however, that the improvement in health was not real, for, upon putting these persons to labour, they were incapable of muscular exertion. There was, moreover, a loss of weight in them. These were the persons in whom, if imprisonment were continued, tubercular disease would develop itself. With respect to the prevalence of tubercular disease generally, the mortality from this cause in the hulks had been increased by a circumstance which should be

mentioned. On the carrying of the Emancipation Act in 1834, the black convicts of the West Indies were sent to this country on their way to Van Diemen's Land. They arrived chiefly in the autumnal season, and phthisis developed itself in great numbers as the effect of confinement and cold. This accounted for the large mortality for some time, from phthisis, in the hulks. The cruelty of this plan was represented to Government, and was not persevered in. In addition to this, also, it might be stated, that pardon was not granted to prisoners in the hulks on account of ill health. He differed with Dr. Baly respecting the influence of prison food in the production of diarrhoea, and gave two or three illustrations in point. In one of these he traced the prevalence of this disease to soup containing a quantity of barley-husks; and, in another instance, to the bread used by the prisoners having been made of flour a quantity of which had been ground from wheat damaged by the sea, and which had begun to vegetate. In both these instances the bowel-complaint prevailed during the time the prisoners were partaking of the unwholesome diet, and disappeared on substituting more healthy food. He agreed with Dr. Webster that hot air produced catarrh, and chronic bronchitis, if not phthisis. In the Chelmsford Prison, the prisoners were taken from a cell of high temperature to stand at the cold treadmill, and were again taken to the cell. Catarrh was frequently caused in consequence. This had also occurred in other prisons.

Dr. Webster expressed his satisfaction that Mr. Bossy's extensive experience respecting prisoners coincided with the opinions he had expressed relative to the influence which particular kinds of food produced on the health of the inmates of prisons. In addition to the facts Mr. B. had stated, he (Dr. W.) might mention, that in Bridewell, although situated in a confined locality of the City of London, near Fleet-ditch and Puddle-dock, bowel-complaints, or any serious disease, had not been prevalent, notwithstanding the prisoners were not allowed to take regular out-door exercise. Generally speaking, the men were employed on the treadmill, and the women in picking coire, but their food was of good quality, and the bread excellent; indeed, it could not be purer, as the corn was ground in the prison, and baked at the house of Occupations, with yeast also made on the premises. He (Dr. W.) was likewise gratified to hear that Mr. Bossy entertained the same opinions with himself respecting the ventilation of prisons, and the injurious influence which the breathing of hot dry air had in producing pectoral disease amongst the inmates. Having stated, in the previous remarks he (Dr. W.) had taken the liberty of offering to the Society,

that a large proportion of the prisoners recently pardoned at the Penitentiary were discharged on account of being affected with phthisical symptoms, he would now ask Dr. Baly whether any of these patients had subsequently recovered; for if such were the case, the fact would show that their residence in prison tended materially to produce consumption. With reference to the lunatics sent to Bethlem Hospital from the Penitentiary, it must be satisfactory to Dr. B. to hear, that during last year four individuals formerly under his care in that prison had been cured, and removed from the hospital by warrants of the Secretary of State.

Dr. Baly replied, that in a great number of cases of phthisis at the Penitentiary, apparently hopeless, the disease was immediately checked on the release of the prisoners, many of whom entirely recovered; a favourable change took place almost immediately they were informed of their probable change. These cases shewed, in a remarkable manner, the influence of mind on the progress of disease. Mr. Bossy had, in some degree, misunderstood him with reference to the causes of diarrhoea and dysentery, which he admitted might occasionally be produced by impure food. But when diarrhoea or dysentery were prevalent for several years, they did not then arise from diet, but were always dependent on the locality of the prison. The causes mentioned by Mr. Bossy as productive of bowel complaints could not be always prevalent. Facts which he (Dr. B.) had referred to in his paper proved that his view was correct, for not only were these diseases found to be more prevalent at particular seasons, as in spring and autumn, but when they were epidemic in the surrounding neighbourhood. In these instances the diseases were owing to miasma.

Dr. Gregory suggested that as Dr. Baly was about to furnish other papers on the subject of disease in prisons to the Society, that much benefit would be derived, particularly in respect to age, if he directed his attention to the acquirement of tubercular diathesis in a number of persons under circumstances directly the reverse to those of the prisoners. He thought soldiers offered this opposite condition. He had been struck with the origin of phthisis in the recruits of several regiments, particularly the foot-guards. It was a curious fact, that many of these men, even though carefully examined by the stethoscope, and pronounced healthy, at the end of a few months fell victims to tubercular disease. The announcement of the result of investigation into these cases in Dr. Baly's paper would increase its value, and enhance our knowledge of the subject.

Dr. Baly was obliged for the hint thrown out by Dr. Gregory. He was well ac-

quainted with the prevalence of consumption among the foot-guards, who suffered from this disease to twice the extent as did the cavalry regiments. He did not agree with Dr. Gregory as to their being placed under circumstances the reverse of prisoners; on the contrary, they were subjected to several of the same injurious influences. Nothing, for instance, could be worse than the ventilation of the barracks, particularly those in Portman-street and in the Tower. There was no ventilation whatever in the rooms they slept in, and these were their sitting-rooms also. They mounted guard frequently, and were therefore frequently exposed to cold, as were prisoners. There was another cause which acted also on both these classes, and this was, the listless state of mind which resulted from their condition, and the inactive state of their bodies, both having a tendency to the production of tubercular disease. To these might be added, perhaps, their dissolute habits.

Mr. Cooper regarded the depressed condition of mind of the recruits, conjoined with their severe exercise in drilling, as a further cause of phthisis in these men.

Mr. Probert considered that the well-known indulgence of recruits—who were generally fresh from agricultural pursuits—in drinking, and their contraction of venereal disease, must have an influence in the destruction of their health.

Mr. Macilwain considered Dr. Baly's paper important in reference to the causation of disease and its amelioration. He inquired whether in those prisons in which diarrhoea was prevalent, as the result of locality, the peculiarity was in the soil, or in the ordinary matters of drainage. He made some remarks on the influence of ventilation on the function of the lungs.

Dr. Baly regarded the diarrhoea as the effect, not of imperfect drainage, but of a moist state of ground for some extent round the prison. The Wakefield House of Correction, in which diarrhoea was more generally prevalent than in any other prison of England, was situated in a hollow valley of clay, which was often flooded in winter, and in summer was not quite dry. The sub-soil was clayey, the surface of a rich vegetable character.

ANNIVERSARY MEETING, MARCH 1.

The anniversary meeting was held in the library, and was numerously attended. Mr. Macilwain made a long address, chiefly in reference to the mode of election, and the passing over, as he considered, many older members of the Society, and electing others who were in some way connected with the Council of the College of Surgeons. He mentioned three or four instances in particular. He expressed his regret that general

practitioners should be so little regarded by the Council of the Society, that the name of only one was in the present balloting list. He proceeded to shew by a reference to statistics that general practitioners had never had their due share of government in the Society, and declared that the charter authorized no distinction between the classes of the profession as to their eligibility for any of the offices. He complained of the mode in which papers were occasionally dealt with by the Council of the Society, and thought it a hardship that authors were not, when they were desirous of doing so, permitted to read their own papers.

A vote of thanks was carried to Dr. Cursham.

The President delivered his annual address; after which the following gentlemen were elected.

President.—William F. Chambers, K.C.H. M.D. F.R.S.

Vice-Presidents.—Theodore Gordon, M.D.; Thomas Watson, M.D.; J. G. Perry, Esq.; Richard Welbank, Esq.

Treasurers.—George Burrows, M.D.; Cæsar Hawkins, Esq.

Secretaries.—George Cursham, M.D.; T. B. Curling, Esq.

Librarians.—R. B. Todd, M.D. F.R.S.; Benjamin Phillips, Esq., F.R.S.

Other Members of the Council.—Neil Arnott, M.D. F.R.S.; William Baly, M.D.; T. A. Barker, M.D.; Jonathan Pereira, M.D. F.R.S.; Henry S. Roots, M.D.; Robert Dunn, Esq.; Alexander Nasmyth, Esq.; Edward Stanley, Esq. F.R.S.; Samuel Solly, Esq. F.R.S.; Martin Ware, Esq.

CASES OF EXTIRPATION OF DISEASED OVARIA.

BY DR. EPHRAIM M'DOWELL.

THE operations of Dr. Ephraim M'Dowell, of Danville, Ky., for extirpation of diseased ovaria, having been so frequently quoted of late, and often incorrectly, and the journal in which they were originally published ("The Eclectic Repertory") being inaccessible to the profession generally, we have thought that we should do a service by republishing them.

Dr. M'Dowell's first paper, containing an account of his first three operations, was published in the Eclectic Repertory for April, 1817; and his second paper, containing an account of two subsequent operations, was published in the same journal for October, 1819.

CASE 1.—"In Dec. 1809, I was called to see a Mrs. Crawford, who had for several months thought herself pregnant. She was affected with pains similar to labour pains,

from which she could find no relief. So strong was the presumption of her being in the last stage of pregnancy, that two physicians who were consulted in her case requested my aid in delivering her. The abdomen was considerably enlarged, and had the appearance of pregnancy, though the inclination of the tumor was to one side, admitting of an easy removal to the other. Upon examination, *per vaginam*, I found nothing in the uterus; which induced the conclusion that it must be an enlarged ovarium. Having never seen so large a substance extracted, nor heard of an attempt, or success attending any operation, such as this required, I gave to the unhappy woman information of her dangerous situation. She appeared willing to undergo an experiment, which I promised to perform if she would come to Danville, (the town where I live), a distance of sixty miles from her place of residence. This appeared almost impracticable by any, even the most favourable conveyance, though she performed the journey in a few days on horseback. With the assistance of my nephew and colleague, James M'Dowell, M.D., I commenced the operation, which was concluded as follows: Having placed her on a table of the ordinary height on her back, and removed all her dressing which might in any way impede the operation, I made an incision about three inches from the *musculus rectus abdominis*, on the left side, continuing the same nine inches in length, parallel with the fibres of the above-named muscle, extending into the cavity of the abdomen, the parietes of which were a good deal contused, which we ascribed to the resting of the tumor on the horn of the saddle during her journey. The tumor then appeared full in view, but was so large that we could not take it away entire. We put a strong ligature around the fallopian tube near to the uterus; we then cut open the tumor, which was the ovarium and fibrous part of the fallopian tube very much enlarged. We took out fifteen pounds of a dirty, gelatinous looking substance; after which we cut through the fallopian tube, and extracted the sac, which weighed seven pounds and one half. As soon as the external opening was made, the intestines rushed out upon the table; and so completely was the abdomen filled by the tumor, that they could not be replaced during the operation, which was terminated in about twenty-five minutes. We then turned her upon her left side, so as to permit the blood to escape; after which, we closed the external opening with the interrupted suture, leaving out, at the lower end of the incision, the ligature which surrounded the fallopian tube. Between every two stitches we put a strip of adhesive plaster, which, by keeping the parts in contact, hastened the healing of

the incision. We then applied the usual dressings, put her to bed, and prescribed a strict observance of the antiphlogistic regimen. In five days I visited her, and much to my astonishment found her engaged in making up her bed. I gave her particular caution for the future; and in 25 days, she returned home as she came, in good health, which she continues to enjoy."

CASE II.—"I was called to a negro woman, who had a hard and painful tumor in the abdomen. I gave her mercury for three or four months with some abatement of pain; but she was still unable to perform her usual duties. As the tumor was fixed and immovable, I did not advise an operation; though from earnest solicitation of her master, and her own distressful condition, I agreed to the experiment. I had her placed upon a table, laid her side open as in the above case; put my hand in, found the ovarium very much enlarged, painful to the touch, and firmly adhering to the vesica urinaria, and fundus uteri. To extract I thought would be instantly fatal; but by way of experiment I plunged the scalpel into the diseased part. Such gelatinous substance as in the above case, with a profusion of blood, rushed to the external opening, and I conveyed it off by placing my hand under the tumor, and suffering the discharge to take place over it. Notwithstanding my great care, a quart or more blood escaped into the abdomen. After the hemorrhage ceased, I took out, as clearly as possible, the blood, in which the bowels were completely enveloped. Though I considered the case as nearly hopeless, I advised the same dressings and the same regimen, as in the above case. She has entirely recovered from all pain, and pursues her ordinary occupation."

In his second paper Dr. M'Dowell states that he thought this patient well of her disease: "but she informed me a short time since, that it had been growing for the last 12 or 18 months, and says it is now about the size it was when I opened her six years ago."

CASE III.—"In May, 1816, a negro woman was brought to me from a distance. I found the ovarium much enlarged, and as it could be easily moved from side to side, I advised the extraction of it. As it adhered to the left side, I changed my place of opening to the *linea alba*. I began the incision, in company with my partner and colleague, Dr. William Coffey, an inch below the umbilicus, and extended to within an inch of the *os pubis*. I then put a ligature round the fallopian tube and endeavoured to turn out the tumor, but could not. I then cut to the right of the umbilicus, and above it, two inches, turned out a scirrhous ovarium, (weighing six pounds), and cut it off close to the ligature put round the fallopian tube.

I then closed the external opening, as in the former cases; and she complaining of cold and chilliness, I put her to bed prior to dressing her—then gave her a wineglassful of cherry-bounce and thirty drops of laudanum, which soon restoring her warmth, she was dressed as usual. She was well in two weeks, though the ligature could not be released for five weeks; at the end of which time the cord was taken away; and she now, without complaint, officiates in the laborious occupation of cook to a large family."

CASE IV.—"In April, 1817, I operated on a negro woman from Garard county; extracting a scirrhus ovarium, weighing five pounds. The incision was made near the linea alba: as in cases formerly related, I tied a cord firmly round the ligament, attaching it to the uterus, and cut away the ovarium; but owing to the shortness and sponginess of the part, the cord slipped off before I laid the ovarium out of my hands, and a profuse discharge of blood took place. I immediately drew the uterus to the external incision, and commenced tying up the bleeding mouths separately. This also, in consequence of the diseased state of the parts, proved only of partial efficacy, as several of the ligatures cut through on tying them. I now thought it all over with my poor patient, but arming a needle with a strong ligature, I passed it round the ligament; securing it in its place by taking several stitches over its surfaces as I passed it round, and firmly tied it. By turning her nearly on her stomach I was able to get most of the blood out of the abdomen, using my hand to extract the coagulated portion. The incision was then closed by the interrupted suture, and strips of adhesive plaster. She recovered happily; but I am told her health is not good; the account I had of her was awkwardly given; from what I could learn her complaint is hysterical. This, though the smallest ovarium I have ever extracted, was much more troublesome to the patient than in any previous case. Besides experiencing severe lancinating pains in the parts, she was seldom able to discharge her urine, without getting almost on her head, in consequence of the tumor falling down into the pelvis, and compressing the urethra."

CASE V.—"A negro woman, from Lincoln county, was brought to me in April, 1818, supposed by the different physicians who had attended her to be affected with ascites; she had been under their care about eighteen months. On examining her I could very plainly discover the fluctuation of fluid in the abdomen, and for some months administered medicines for ascites without effect: despairing of the powers of medicines, I at length tapped her, and discharged thirteen quarts of gelatinous fluid, such as I had before met with in dropsical ovaria, of so

thick a consistence that I found it extremely difficult and tedious to discharge it. In two months after I found it necessary to tap again; during the process of discharging it a second time, the opening was frequently stopped by viscid portions of the jelly, which were broken by introducing a probe; when the abdomen was pretty well evacuated, I discovered, with the probe, a firm substance, which, on minute examination, I found to be of considerable size. I at once supposed the existence of a dropsical ovarium, in which I was confirmed on finding the uterus empty by examination per vaginam. Some months after she was again tapped, at which time I made the opening large enough to admit my finger; by which means I was able to ascertain the nature of the disease beyond a doubt. I informed her master what was certainly her situation, and that nothing but excision could effect a cure. My advice was not immediately followed, nor until after she was tapped a fourth time; a week or two after she was brought to Danville to undergo the operation, which was performed May 11, 1819. The diseased ovarium being on the left side, and evidently dropsical, the incision was of course made on the left side. On exposing the tumor, it was found to adhere to the parietes of the abdomen, and to the intestines, by slender cords which were easily separated with the hand, and which caused a slight effusion of blood. To the uterus two strong ligaments adhered; one, the natural ligament, attaching the ovarium to the uterus, the other, an artificial one, attached to the fundus uteri, which appeared to be composed of the above-mentioned slender cords, compacted together. I then tied fine cords of silk firmly round each of these ligaments, discharged the contents of the tumor, and cut it away.

"There were sixteen quarts of gelatinous fluid discharged from the tumor and abdomen. The dressings and precautions were the same as in other cases. The second day after the operation she was affected with violent pain in the abdomen, together with obstinate vomiting. She was bled as copiously as her strength would allow, but without producing any abatement of the pain or vomiting. On the third day she died. On examination after death, the uterus, contrary to expectation, appeared natural and uninflamed, the right ovarium healthy, the silken cords were securely and properly fixed, and not in a situation likely to injure the adjoining parts. Her death had proceeded from peritoneal inflammation. This membrane, throughout its whole extent, appeared greatly inflamed, and the intestines largely inflated.

"I was assisted in this operation by my nephew, Dr. William A. McDowell. Doctors Weizgar, Tomlinson, and Horr, were present.

"On examining the substances we had removed, the contents of the sac presented a variety; different portions of the fluid were of different colours—semi-transparent, white, brown, and yellow. There was also contained in the sac a considerable quantity of hair, which grew from the inner surface. Enveloped in the inner substance of the sac we found a bone, resembling very much in shape the front tooth of a cow.

"From the circumstance of the hair and bone, one or two of the physicians present were inclined to believe the disease originated from an extra-uterine conception, and that all of the fœtus had been absorbed, save the hair and single bone which was found. This question I submit to the faculty."—*American Journal of the Medical Sciences.*

RETROVERSION OF THE WOMB IN THE UNIMPREGNATED STATE.

By DR. HELMUTH.

MADAME B—, 30 years of age, of middle stature, almost always healthy, the mother of four children, suffered since her last confinement, four years previously, from an inconsiderable prolapsus of the womb, which heretofore had not created any inconvenience. At Dr. H.'s visit, upon 15th Dec. 1842, she complained of colic with dragging pains in the abdomen, and feeling generally indisposed; for these symptoms a saline effervescing mixture was ordered, together with warm frictions of essential oils over the belly. On the 22d the patient agreed to submit to a vaginal exploration, which she had formerly declined. The following was her condition at that period: she lay in bed, her countenance red and bloated, complaining of headache, heat of skin, thirst, restlessness, and rather violent pain in the lower part of the belly; the pulse was frequent, (100) small, contracted; no urine had been passed for 24 hours, or any stool for 48 hours. On examination the belly was found distended, and above the pubis an elastic tumor, painful on pressure, could be perceived. Internally the temperature of the genitals was increased; the uterus was felt deeply placed in the lesser pelvis, the vaginal portion and orifice turned to the pubic arch, the body towards the cavity of the sacrum. In consequence of this unnatural position of the uterus, the substance of which moreover was swollen from the unwonted irritation and pressure, the neck of the bladder and rectum were quite compressed, and the discharge of urine and feces hindered. An attempt at reposition *per vaginam et anum* failed, owing to the swollen and painful state of the womb, coupled with the retention of urine and ex-

crement; a repetition, after the urine had been taken off through a catheter, and an endeavour made to remove the fecal accumulation by several injections carefully administered, which however did not penetrate, proved equally ineffectual. The patient was now directed to take a dose every second hour of an aperient mixture containing Epsom salt and castor oil, to apply linseed poultices to the abdomen, in conjunction with frictions of anodyne volatile liniment. To relieve the obstinate constipation some emollient clysters were given in the evening; but brought away very little. On the 23rd, there were increase of pain of abdomen, and fever towards evening, indicative of inflammation of the womb—*metritis*. Leeches were therefore applied to the abdomen, perineum, and thighs, and the bleeding encouraged by the aid of a warm bath; 5 grains of calomel were prescribed twice a day, as also an oily emulsion, and emollient injections within the vagina; the urine being withdrawn twice daily by the catheter. By pursuing steadily the above treatment the inflammation had gradually abated. By the 28th a critical sweat supervened, a little urine passed of itself, as also some slimy bloody feces; the uterus meanwhile, diminished in bulk, resumed its original situation. Progressive improvement followed, menstruation was re-established, and after the use of tonics the patient completely recovered, with the exception of a slight prolapsus of the womb."—*Casper's Wochenschrift*, Oct. 1844.

[This is one of those rare instances of retroversion of the womb occurring in the unimpregnated female. It is interesting in reference to the case of Miss H— M—, lately brought before our readers.—ED. GAZ.]

SUMMARY OF THE TRANSACTIONS OF THE COLLEGE OF PHYSICIANS AT PHILADELPHIA.

March to October, 1844.

THE principal articles of interest in the present No. of the Transactions of the College, are the Annual Report on the Diseases of Children, by Dr. Condie, and a case of death after parturition, caused by rupture of the uterus, by Dr. Henry Bond. This last we transfer to our pages:

April 8th, 1844. At 10 P.M. Dr. Bond was requested to visit Mrs. R—, and was informed by the messenger that she was affected with colic. Mrs. R. had a good form and constitution, and enjoyed good health until this attack. She is 28 years of age; was married on the 4th of last October;

had never menstruated after marriage; supposed that she became pregnant within one week after that event, and expected to be confined in the beginning of the second week in July. About noon to-day she was reaching over a flour barrel that stood end-wise, to pick up something behind it, in doing which she felt something give way, and was attacked with pain in that part of the abdomen where she came in contact with the sharp edge of the barrel. The pain continued all the afternoon and evening, and was supposed by her female attendants to be colic, and, in consequence, ginger-tea and other domestic remedies had been administered. But the pain became worse in the evening, and when the doctor visited her, she evidently had labour pains, but no stools or discharge; he directed her an opiate, rest and cool regimen, with orders to send for him if she was not shortly relieved. At 11½ o'clock, P.M. he was sent for again. The pains had increased, and the os uteri had become relaxed, and more than half dilated. The pains were more distressing than usual in such cases, and she was inclined to keep her hand applied to that part of the abdomen which had come in contact with the barrel. The membranes were very strong, and continued unbroken, until a loose sac of water presented externally, and when broken, there was a gush of a large quantity of liquor amnii. The delivery of the child followed almost immediately afterwards—April 9th, at 2¼ A.M. Soon after this, he began to use the ordinary means to promote the delivery of the placenta, which he continued to do for three quarters of an hour without any effect. There was no sign of its coming—there was neither any expulsive pain, nor the least appearance of any coloured discharge. He then gave twenty grains of ergot, and after a quarter of an hour, twenty grains more. At the end of ten or fifteen minutes more, no uterine contraction had occurred,—at least he discovered none, either by questioning the patient or by watching her motions.

The uterus was so low that he could easily pass his finger within its neck, which was soft and relaxed; but above that, the uterus seemed to have assumed something like an hour-glass contraction, so low down towards the neck, as to embrace in the upper chamber nearly or quite all of the placenta. He immediately prepared to introduce his hand, without waiting longer for the ergot to act. The cord was ten inches long, very large, and firm for that period of gestation, except for a short distance near its insertion into the placenta, where it was very slender. In his attempts to examine the condition of the uterus and to deliver the placenta, the cord was torn

from its attachment. This occurred only a short time before the introduction of the hand. The os externum and the os cervix uteri were so relaxed, that the hand passed with ease until it reached the above-mentioned contraction. This was so rigid as to occasion some delay. During the process of introducing the hand, pretty strong uterine contraction came on, which increased the delay. Whether this was the effect of the ergot, or of the irritation of the hand, is doubtful;—probably it was partly owing to each. Upon passing the hand through the stricture, into the chamber containing the placenta, it was found that this was detached from the uterus in no part, so far as could be perceived. Up to this period there was no sanguineous discharge, except a very little, which was supposed to proceed from the separation of the cord. The doctor proceeded slowly and carefully to detach the placenta, which adhered so firmly as to make the operation tedious. After the whole of the placenta was separated, he found a strong membranous attachment to one part of the fundus, which he could not overcome. It was of limited extent, being less than an inch. He used as strong traction as he thought could be done without endangering a laceration of the uterus. When pulling it, it seemed to yield a little, but, upon examination, there was no sign of its being detached. It occurred to him that, possibly, there might be an hour-glass contraction, embracing a small part of the placenta and membranes, although he could perceive no rounded edge and depression around the adhesion such as he should expect in that case; but to determine this, he applied the other hand to the abdomen, and this examination entirely satisfied him that such could not be the case. He then separated the placenta from this adhering membrane, and withdrew it. The membrane, which felt like a ligament, had such remarkable strength, that the separation was not easily accomplished. The operation occupied three quarters of an hour, and was attended with very little hæmorrhage.

The child lived twelve hours. The foetal end of the cord, as before observed, was very thick, and he tied it, as he thought, very carefully; but in a little while he discovered that, in proportion to the size of the child, there was considerable hæmorrhage, such as might have destroyed it, had it not been discovered and arrested. It had not, however, produced any signs of anæmia.

10th.—Last evening the patient began to be uneasy and feverish,—a cathartic of senna, manna and sulphate of magnesia, in divided doses, was directed. It operated sufficiently during the night, but the febrile symptoms and uneasiness were not mitigated. Tongue a little coated—pulse 110 to 120—

some tenderness in the left iliac region—the uneasiness in the head increased. In the afternoon, the symptoms all aggravated—no lochial discharge. Directed the neutral mixture—v. s. oz. xxiv.—fomentations. The blood drawn exhibited a thick buffy coat and small cupped coagulum.

11th.—Head much relieved since the v. s., but the patient had a very uncomfortable night—tongue has a yellowish white coat, thickest in the middle—had a severe chill this morning at 7 o'clock—pulse 120 to 130. After the application of the fomentation, a copious sanguineous discharge from the vagina came on, which it was thought desirable to promote, therefore the v. s. was not repeated nor leeches resorted to this morning as would otherwise have been done. Directed cal. ipecac. and opium. At 5 P.M. pulse 102; at 11 P.M. 82—all the symptoms mitigated. The pain in the abdomen, last night and to-day, which was almost entirely confined to the iliac region, was intermittent, like after pains.

12th.—In the morning, found her more comfortable in every respect—pulse 80 to 90. No tympanitis or swelling of the abdomen, and the tenderness is chiefly confined to the part before-mentioned—sanguineous discharge has ceased, and the vaginal discharge has become offensive: some confusion of the head in the night and this morning. When visited at 5 P.M. the patient was found to have become worse soon after the morning visit—great increase of febrile excitement and of tenderness of the abdomen—thirst great—began to be tympanitic. Upon examination, found some shreds of membrane in the neck of the uterus, which were removed; one part, however, extended into the uterus, which could easily be seized hold of, but adhered too firmly to be extracted without applying more force than could be done with safety. Some time afterward it came away, and the offensive discharge ceased.

13th.—She began in the night to belch up whatever she drank—pulse very variable—tympanitis increasing, as well as the distress and tenderness in the abdomen. Dr. Meigs saw the patient twice to-day, but it is unnecessary to detail the treatment, which had no influence in controlling the disease. The discharges from the stomach became more and more dark, until they closely resembled coffee-grounds. The patient grew rapidly worse, and died next morning, April 14th, at 4 A.M. about 98 hours after delivery.

Autopsy, 29 hours after death.—The operation was performed by Dr. Goddard, in the presence of Drs. Huston and Bond; and this account of it is chiefly taken from Dr. Goddard's notes. Abdomen alone examined. On opening the peritoneal cavity, a quantity of foetid gas escaped, which

occurrence Dr. G. observed he had never met with, except in cases of perforation of the intestines, or as a result of putrefactive fermentation. That part of the peritoneum, where this gas was contained, was dry and glossy, as if it had been hung up in the open air—colon much distended, and very low in the abdomen. Upon carefully raising the omentum majus, the whole of which was gangrenous and foetid, a black mass, about two inches long and three quarters of an inch wide, was brought into view, one end of which passed into an opening in the fundus of the uterus. At first view this looked like a coagulum of blood, which in some parts had begun to be organized, but which, being drawn out and washed, proved to be a portion of the foetal membranes, with some remains of placental fibres, and the debris of a coagulum of blood—the whole being in an advanced state of putrefaction. The uterus was next examined, and found to be lacerated at the left extremity of the fundus, above and very near the junction of the Fallopian tube. The rupture in the peritoneum was small—about three-fourths of an inch in length, and entirely filled up by the membrane before alluded to. The laceration of the proper substance of the uterus was greater, and its edges were covered with a coagulum partially organized. *The lining of the uterine cavity elsewhere looked well.* The peritoneum showed traces of high inflammation in several parts—about the stomach, among the small intestines and especially at the pelvic region, but appearing comparatively healthy at the anterior portions of the abdomen. There was very little effusion into the peritoneal cavity—there was a small quantity of blackish fluid, with flakes of pus floating in it, in the most dependent portions of the abdominal cavity.

There is, therefore, reason to believe that, when the laceration took place, it was chiefly in the uterine substance, the peritoneum resisting; that the unbroken membranes protruded, like a hernia, through the aperture into the abdominal cavity;—that the contraction of the uterus, after the delivery of the child, closed so firmly upon these, as to strangle them, and to resist the efforts to withdraw them, during the operation for extracting the placenta. This examination explains the difficulty attendant upon the delivery of the secundines; for although the placenta was in no part detached from the uterus when the hand was first introduced, still there did not appear to be any preternatural adhesion of growing of the placenta to the uterus; but the chief difficulty arose from the extraordinary strength of the foetal membranes, and their inextricable confinement. The revelations of this examination were especially gratifying to the doctor, as he had apprehensions be-

fore this, that although the labour was brought on by an accident, the febrile and inflammatory symptoms, and the fatal termination, might have been the consequence of the operation of extraction; although he had proceeded with such caution, that he was satisfied it could have resulted only from the irritation of the protracted operation, and not from any laceration, or other violence done to the part."—*American Journal of the Medical Sciences.*

POISONING BY ARSENIC TREATED WITH HYDRATED OXIDE OF IRON.

BY DR. KRAFFT.

THE chimney-sweeper K—, of B—, kept in the house a mixture of white arsenic and flour, for destroying rats. His sister one evening, during his absence, unwittingly prepared for the family a meal-pap for supper, with the above mixture. Of this the three children partook, about eight o'clock in the evening; one a boy of 13, another of 10, and the last a girl of 11 years old; the remainder was swallowed by the aunt. The children ere long felt unwell, and hurried to bed, but shortly after began to complain of severe pains in the belly, and sense of urgent constriction referred to the stomach. The aunt was similarly attacked. Under aggravation of these symptoms the whole party were seized with violent and continued vomiting. About this time, 10 o'clock P.M., K— returned home, and learned the cause of the mischief. He thought to subdue it by administering copious draughts of milk. But as the vomiting persisted, and the pains became more intense, he got alarmed for their safety, and sent for Dr. Krafft at one o'clock in the morning. From the statement of the messenger, and the nature of the symptoms, there could be no doubt as to the fact of arsenical poisoning; the doctor therefore ordered hydrated oxide of iron to be exhibited to each of the children, in the dose of half a table-spoonful every half hour, and to the aunt a whole table-spoonful at like intervals, with an injunction that word should be sent him in the course of the morning of the result, himself being laid up with influenza at the distance of a league. He received intelligence in the afternoon that the three children were completely recovered; but the aunt still suffered from pain in the stomach, headache, and tremors of the limbs, for which ten leeches to the epigastrium, and internally an oily emulsion, were prescribed. During the day he paid the family a visit, and found all well, comfortably sitting round the stove. The parent spoke in the highest terms of the value of the antidote, and remarked that the girl

and younger boy, just convalescent from an attack of influenza, were almost exhausted with the frightful cramps, lying stiff, with their bodies drawn backwards, the hands and face cold, covered with a clammy sweat, and apparently near death; while the two others seemed almost worn out through continued vomiting, sense of choking, and racking pain of the belly. They had, however, scarcely taken two doses of the hydrated oxide before improvement was visible, which proceeded steadily with each spoonful. The pain of the belly was somewhat obstinate, but the vomiting ceased at once, and was followed by frequent liquid stools; after which the children slept quietly till morning, awaking fatigued, but in good health. The aunt did not get well so rapidly, though nothing more was required in the way of medicine than the leeches and emulsion. The quantity of arsenic contained in the pap could not be ascertained, as K— had deposited the remainder of the rat-poison in the ground.—*Casper's Wochenschrift*, Oct. 1844.

[It is to be presumed that the copious draughts of milk and water must have served to dissolve whatever arsenic remained in the stomach, otherwise the hydrated peroxide of iron would have proved effectless.—*ED. GAZ.*]

AMMONIA GIVEN OFF BY ALBU- MINOUS FLUIDS.

M. TURCK communicated a memoir to the Academy of Sciences, on the chlorides occurring in albuminous liquids. All the albuminous liquids he has yet examined, namely, the saliva, blood-serum, and white of egg, are continually disengaging ammonia. The formation of this gas is due, he thinks, to the simultaneous presence in these liquids of muriate of ammonia and caustic soda, which react unceasingly one upon the other, until the soda completely disappears. In fresh albuminous fluids there is not the least trace of chloride of sodium; it is only in virtue of the above reaction that the salt is progressively formed. In proportion as the soda replaces the ammonia a very singular phenomenon of crystallization is exhibited, which merits the attention of the crystallographer. He concludes by stating that the evolution of ammonia from albuminous liquids performs an important part in the animal economy.—*Gazette Medicale de Paris*, Feb. 8, 1845.

THE NEW BILL.

To the Editor of the Medical Gazette.

SIR,

In your remarks on Sir J. Graham's Bill, just received, at page 718 I think there is

some slight uncertainty as to the absolute right of registered physicians practising in London, if they please so to do. Your words are, "It is not now the intention of the Right Hon. Baronet to repeal the act entirely, but only so far as to exempt from its penalties all physicians who shall be registered according to the provisions of the proposed measures." Am I to understand from this that all registered physicians will be entitled to practise in London without let or hindrance from the College of Physicians? Wherein is to consist the registration? and are all graduates of Edinburgh, Dublin, and Glasgow, entitled to be registered on merely showing their degrees, without any further examination? for it would be a matter of perfect absurdity that such men, several of them growing grey in the profession, and forming nine-tenths of the physicians of the empire, should be required to submit to any examination—to be examined, perhaps, by some who were learning their alphabets, where their older brethren were working hard in an arduous profession. Pray enlighten us on this subject. Country physicians have long felt the illiberality of the London College of Physicians, and few of them have latterly sought admission into its walls; and it is to be hoped by Sir James Graham's bill we may be permitted, if we please, to practise in London without any molestation. I think you would confer a favour upon your subscribers by giving the bill in full; and with every excuse for thus troubling you,

I am, sir,

An old correspondent,
MEDICUS.

March 3, 1845.

[We subjoin the following extracts from the new bill in reference to the points mentioned by our correspondent.—ED. GAZ.]

In clause 32, it is enacted "that it shall be lawful for the said Council" (of Health) "on the application of any person legally practising or entitled to practise at the *end of this session of Parliament*, as a physician or surgeon in any part of the United Kingdom of Great Britain and Ireland, or as an apothecary in England, to cause the name of such person to be registered as a physician, surgeon, or licentiate in medicine and surgery, as the case may be, on production to the said Council of his diploma, license, or certificate, &c."

In clause 30, it is enacted "that all persons who shall be registered by the said Council as physicians, shall be entitled without other license than such registry to exercise or practise physic throughout the United Kingdom of Great Britain and Ireland, and in all other parts of her Majesty's dominions," &c.

Further, in clause 13, it is enacted "that a register shall be kept and published from time to time, under the direction of the said Council, of all persons who shall have been examined, and shall have received and shall exhibit before the said Council, letters testimonial, as hereinafter mentioned, of their qualification to practise as a physician, or as a surgeon, or as a licentiate in medicine and surgery," &c.

QUIESCENCE BY ADHESION.

To the Editor of the Medical Gazette.

SIR,

THE principle, in the animal economy, of quiescence by adhesion, which was suggested in a letter signed ZETA, in your journal of 2d August, if true, seemed to the writer not likely to be confined to that organ alone, as he endeavoured to instance afterwards in the ligaments of the wrist and instep. And to this extension of the principle he might have added the provision apparently of a similar kind in those four muscles of the leg whose tendons pass to the sides and sole of the foot, round the external and internal ankle-knuckle, namely, the peronei longus and brevis on the one side, and the tibialis posticus and flexor digitorum longus on the other. Thus, he considers the crucial ligament and the two malleoli to form not only a system of pulleys whereby indirect motion is effected, but likewise a system of breaks to facilitate repose, without the help of which the act of standing would be one of the most inconvenient and tiresome efforts of balancing that can be imagined.

The present return to the subject is only the fulfilment of my promise; for not being aware that it has met with any notice from the medical press as the enunciation of a new fact in physiology, I am made doubtful of its correctness, and therefore beg you will use your discretion in calling the attention of your readers to the subject by the insertion of this note from—sir,

Your obedient servant,

ZETA.

Feb. 12, 1845.

THE TERCHLORIDE OF GOLD AS AN OUTWARD APPLICATION IN RHEUMATIC-GOUTY AFFECTIONS,

MADE into a salve with lard, has been recommended by Dr. Wilczewski. It is said to relieve the pain often in a truly wonderful manner. The purple stains are speedily removed by washing the part with a little urine; a fact that was discovered by accident.—*Medicinische Zeitung*, No. 11, 1844.

STATE OF THE THERMOMETER,
DURING FEBRUARY 1845.

To the Editor of the Medical Gazette.

SIR,

I SEND you a record of the state of Thermometer, at Torquay and at Brixton Hill, in the month of February, taken under the same circumstances, and at the same periods of the day, as in my communication for January.

The Devonshire climate, as you will see, has borne the test of this severe winter well, the lowest point which the Thermometer marked in the Strand, at this place, in February, being 30 degrees: on the high ground in the neighbourhood I believe it was as low as 24.—I am, sir,

Your obedient servant,
C.

Feb.	Brixton Hill.	Torquay.
1	40	44
2	40	44
3	44	43
4	43	50
5	44	48
6	40	48
7	37	46
8	36	45
9	37	46
10	37	48
11	35	50
12	32	46
13	35	48
14	40	51
15	41	50
16	42	50
17	42	51
18	42	51
19	38	50
20	38	47
21	40	46
22	39	50
23	41	51
24	43	51
25	45	49
26	47	51
27	48	51
28	45	52

FARRINGTON GENERAL
DISPENSARY.

DR. W. Camps, and Dr. W. H. Brown, have been appointed Physicians to the above-named institution.

ROYAL COLLEGE OF SURGEONS OF
ENGLAND.

List of Gentlemen admitted Members, Feb. 21.—J. Heynes.—C. Andrews.—G. Ayton.—F. R. Gibbs.—A. B. Allen.—S. Le Brun.—G. J. Macklin.—R. S. Rogers.—D. H. Gabb.

APOTHECARIES' HALL.

Gentlemen who have obtained Certificates, Feb. 20.—George Cleveland, Lowestoff, Suffolk.—L. F. Crummey, Stokesley, Yorkshire.—Peter Thornton, Glossop, Derbyshire.—Feb. 27.—J. M. Goodinge, Redruth.—T. R. Cotterell, Charlbury, Oxon.—A. Stansbury, Kingsdown, Bristol.—J. N. Tompson, Totness, Devon.—T. S. Howell.—J. A. Haynes.—H. Woodward, Bicester.

MORTALITY OF THE METROPOLIS.

Deaths from all causes registered in the week ending Saturday, Feb. 22.

ALL CAUSES 1121

SPECIFIED CAUSES 1119

I.—Zymotic (Epidemic, Endemic, and Contagious) Diseases, 176; among which, of—

Small Pox	30
Measles	19
Scarlatina	30
Whooping Cough	33
Croup	8
Thrush	2
Diarrhoea	7
Dysentery	1
Cholera	0
Influenza	3
Typhus	30

II.—Dropsy, Cancer, and other Diseases of uncertain or variable Seat 103; among which, of—

Inflammation	0
Dropsy	35
Scrofula	4
Cancer	16
Atrophy	10
Debility	16
Sudden Deaths	9

III.—Diseases of the Brain, Spinal Marrow, Nerves, and Senses, 164; among which, of—

Hydrocephalus	35
Apoplexy	30
Paralysis	22
Convulsions	44
Insanity	1
Delirium Tremens	0

IV.—Diseases of the Lungs, and of the other Organs of Respiration, 408; among which, of

Pneumonia	104
Hydrothorax	7
Asthma	55
Phthisis or Consumption	156
Diseases of the Lungs, &c.	19
V.—Diseases of Heart and Blood-vessels	34

VI.—Diseases of the Stomach, Liver, and other Organs of Digestion, 73; among which, of—

Teething	15
Gastritis	0
Enteritis	11
Tabes	7
Hernia	4
Disease of Stomach, &c.	8
Disease of Liver, &c.	13
VII.—Diseases of the Kidneys, &c.	9

VIII.—Childbirth, Diseases of the Uterus, &c. 18; among which, of—

Childbirth	15
Disease of Uterus	3

IX.—Rheumatism, Diseases of the Bones, Joints, &c. 7

X.—Diseases of Skin, Cellular Tissue, &c. 0

XI.—Old Age

XII.—Violence, Privation, Cold, and Intemperance

WILSON & OGILVY, 57, Skinner Street, London.

THE LONDON MEDICAL GAZETTE,

BEING A
WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

FRIDAY, MARCH 14, 1845.

GULSTONIAN LECTURES,

Delivered at the Royal College of Physicians,

By G. OWEN REES, M.D. F.R.S.

Assistant-Physician to Guy's Hospital, and Physician to the Pentonville Prison.

GENTLEMEN,—In the lectures which I am about to have the honour of delivering before you, it is my intention to enter upon the consideration of the blood principally in regard to its physical and physiological attributes, and to combine this with such pathological references as the nature of the subject and the present state of science may permit.

But a short period has elapsed since a confessed belief in the truth of a humoral pathology would have brought disrespect, if not reproof, on the professor, and diseases of the blood were esteemed as existing only in the imaginations of the uninitiated. How far such an opinion may have received support from the state of science at the period to which I allude, it is not very easy to determine, but it appears probable that animal chemistry especially held a low rank among the sciences, and had not given that fair promise of assistance to the physician on which we now have to congratulate ourselves. The greatest fault, indeed, which the most angry humoralist of the present day could consistently find with those who formerly had held his branch of inquiry in contempt would be, that they had not exercised an enlightened faith in the progress of the accessory sciences, and had been content to disregard the phenomena shown by the fluids, because they presented intricacies on which science had as yet failed to throw the desired light. It is scarcely a matter for surprise that, unassisted by the accessory sciences, physiologists and physicians should have had recourse to the assumption of extraordinary agencies to account for the production of the various phenomena observed in the human frame; that, unacquainted

with the extensive range of those sciences which are the legitimate objects of attention in the study of our profession, they should have despaired of ever being able to class the novelties they observed among the effects of any known cause, or of tracing the occurrence of analogous phenomena in the reactions of inorganic nature, and out of the great laboratory of the human organism. It is to be regretted, however, that, instead of patiently waiting in the hope that physics and chemistry might yet unravel the mysteries, the wearied scholar should have invented the power called vitality. It would be well for medicine if the philosophical use of this word were more strictly adhered to in the present day; if, instead of being understood to imply the existence of a power, it were simply used to convey the meaning of a resting-place for phenomena as yet unexplained, and which we may hope will all eventually be recognised as mechanical or chemical effects. Those who are inclined to believe that the functions of the animal organism will be eventually explained on chemical and mechanical principles, and even imitated out of the body, may perhaps be accused of boldness; but is he not rather open to the accusation of temerity who would venture to place a mark beyond which chemical and mechanical phenomena are not to occur? There is one circumstance which appears to have materially interfered with the development of that faith in the power of chemistry more especially, which, had it been encouraged, might have placed us far in advance of our present position. I allude to the fact, that the phenomena observed in the living body have been regarded as in themselves more wonderful than those occurring among the inorganic constituents of the globe. Now it may at first appear a startling assertion to declare that the decomposition of the salts of silver by zinc is in itself quite as wonderful as the most striking phenomenon occurring as the result of organization. It is true that we are able,

in the one case, to adduce analogies without number, and to reduce this result obtained on inorganic matter to a numerous class, but it must not be supposed that such conditions have led us to an appreciation of its essential nature. It is an ultimate fact, that zinc attracts oxygen from the silver salts, and the cause is unknown.

If we consider the so-called vital actions, we shall observe that we are frequently at a loss for analogies among the results obtained by experiment on inorganic bodies, but we must not be too hasty in concluding from this that such phenomena are the effects of a cause entirely separable in its nature from those we recognise for the production of effects in organic chemistry. What I have just advanced may be well exemplified by reference to the phenomena termed catalytic. Catalysis is to organic chemistry what vitality is to physiology; a certain number of inexplicable phenomena occur resembling each other in one or more particulars, and a term has been brought into use indicative of the existence of a power, and under this head have been classed these phenomena, inexplicable on established principles, and presenting all the difficulties in classification which attend the arrangement of the most mysterious actions of the animal organism. We wait for the development of some more general law which shall exclude these unexplained effects, and no longer leave the conventional term catalysis as an opprobrium to chemistry. In like manner, vitality, already deprived of many phenomena once ascribed to its power, may be expected to lose daily in importance, owing to the rapid strides of science, and ultimately to have the whole of its effects grouped as chemical and physical phenomena, which may be initiated out of the living body, or will present such analogies with well-known chemical and mechanical effects as shall at once serve to declare their nature. I may here quote a striking fact connected with the history of the blood, showing the manner in which an advance in physical knowledge has deprived vitality of one of its most curious effects. It has been long known to chemists that the coloured corpuscles of the blood do not yield their colouring matter to serum, though when water is added an immediate solution takes place. Now serum is easily tinged by colouring matters added to it, and presents, in this respect, no peculiarity distinguishing it from other fluids, which makes the effect observed at a first view very unaccountable. Berzelius attempted a chemical explanation of this curious fact. Müller, however, disproved the correctness of his view, and Schultze lately has referred it to the vitality of the red corpuscle, considering that the action of the salts contained in serum stimulated the corpuscle to contraction, and thus

prevented the extraction of its colouring matter; the addition of water, however, diluting the saline solution, he believed diminished irritation, relieved contraction, and allowed the hæmotosine to dissolve from the corpuscle. When, sir, I shall have had the honour of describing, in an after-part of this lecture, the results which have lately been obtained by microscopical experiments, and by taking advantage of the mechanical effects of solutions of various specific gravities, you will perceive that, had the experiment of adding water to serum in order to assist it in dissolving red colouring matter, never been made, you would have been able to foretell that, under such circumstances, the effect would occur as the necessary result of the mechanical conditions presented by the anatomy of the corpuscles, and the action of the laws of endosmose. This action is, in fact, now known to be simply mechanical. I may quote another instance bearing upon the point under consideration in the action of the artificial digestive fluid, a compound which very closely resembles the gastric juice; it is prepared from albuminous structures, and by its action muscular fibre and other alimentary matters are easily dissolved, no other care being necessary to effect this than to keep the mixture at a temperature of the blood (98° Fah.) This fluid may be kept for months in closed vessels, but is still capable of acting in the manner described, showing that digestion is no more than a solvent action, and one concerning the nature of which we may hope to gain valuable information by chemical and microscopical research. It may not be out of place here to mention that it is still, as it ever has been since the fact was first observed, a matter of difficulty to explain the coagulation of the blood, and this action has consequently been attributed to the power of vitality. Now, though our present knowledge, anatomical and chemical, in no way enables us to explain this fact, are we to despair of reducing it to the condition of a result governed by physical and chemical laws? If we study the history of this subject, we shall find that experimenters have certainly been unfortunate in one respect, namely, in not having possessed the advantage of a correct knowledge of the physical structure of the blood, and of the influence of certain physical laws on its condition.

It is true that many whose names have descended to us with well-deserved honour have applied abilities of no ordinary cast to unravel this difficult question, but it must be remembered that such men laboured under disadvantages which are now in great measure removed; and recent discoveries in animal chemistry, together with the advantage to be derived from the use of more perfect optical instruments, place the

observers of the present day in a more favourable position for the prosecution of original research than that enjoyed by the most gifted of their predecessors; and those who now enter on the task which Hunter and Hewson left unfinished, need not feel discouraged by knowing that such men failed where they are hoping to succeed. Though no explanation of the coagulation of the blood has as yet been proposed possessing the simplicity, and admitting of that facility and exactitude of demonstration, which characterises the truth, we have lately gained such important knowledge relating to this effect, that those who are inclined to experiment are placed in a very enviable position for discovery.

As it is my intention on the present occasion to enter on the physical relations of the blood, I shall beg leave, sir, to commence by directing attention to the subject of endosmosis—a power which I hope to shew must exercise considerable influence in directing or controlling both the physiological and pathological phenomena occurring in animal bodies.

Though many years have elapsed since Dutrochet pointed out the curious property possessed by membranes of allowing the mixture of fluids to occur through them, not only by permeation or imbibition, but by a powerful force when any difference in the specific gravity of such fluids exists, still, it is only very lately that this power has been considered in its relation to pathology, and I will therefore shortly state the conditions of endosmotic action. If a tube be closed at one end by membrane firmly secured over it, and then used as a vessel to contain a saline solution, we shall find, on allowing the end secured by membrane to stand in a dish containing either water or a saline solution of less specific gravity than that contained in the tube, that a very rapid action will take place through the membrane, causing the tube to become filled from without, and in opposition to gravity. If we now examine the fluid in the dish, we shall find that a certain quantity of the contents of the tube has descended into it; but the tube will be found to have received a far larger proportion of the fluid in the dish, and if we allow the action to continue, it will at last be filled to overflowing. If we modify this experiment, by putting in the dish a fluid of higher specific gravity than that contained in the tube, we shall find that the tube, instead of filling, becomes rapidly empty, shewing that in both these cases the fluid of high specific gravity attracts that of lower density in larger proportion through the membrane dividing them. It must be remembered that the heavy liquid always passes in a certain proportion through the membrane, but always in small

quantity compared with that of the lighter fluid. Having premised these observations on endosmotic action, I shall now proceed to consider the blood in its physical relations, and in doing so shall regard it as it is generally believed to exist in the circulation, viz. as liquor sanguinis, containing floating coloured bodies designated blood corpuscles or globules. My reasons for following this method are, firstly, to ensure a more thorough understanding of several points to which I shall have occasion to refer; secondly, that I may have an opportunity of showing you that this is really the true condition of the fluid blood as it exists in the vessels; and thirdly, because it is in this form that I believe blood ought to be considered pathologically.

I shall first direct attention to the floating corpuscles. This body has been very differently described by physiologists; some having considered it as composed of solid matter—in fact, that it is a soft solid—while others consider it to possess a vesicular structure. There are considerable and important differences of opinion, however, existing even among those who agree in believing the corpuscle to be a vesicle, some regarding it as made up of a white membrane, containing a fluid of a red colour, while others believe that the vesicle is red, and the contained liquor of a pale tint. The existence of a nucleus in the corpuscle of the human blood is also denied by many; and the exact situation it occupies again divides the opinions of those who believe in its presence. In considering these conflicting opinions, it might at first appear a matter of extreme difficulty to resolve any part of a question depending so much on microscopical evidence; but though there are still many difficulties to contend with in the demonstration of a nucleus, we have fortunately obtained a means of determining pretty certainly two of the points in question—firstly, that the corpuscles possess a vesicular structure, and secondly, that the fluid contained within the corpuscle is red, and the containing membrane white.

If fresh blood be mixed with a watery solution of sugar, salt, or indeed any soluble matter which will not act chemically on the blood, we shall find, on microscopical examination, that certain physical effects are produced on the corpuscles, varying according to the specific gravity of the solution with which the blood has been mixed. Now, presuming the blood corpuscle to be a vesicle or closed membrane containing a liquid, the specific gravity of this must be the same as that of the fluid in which the corpuscle floats, for such is the necessary consequence of stasis; and if, by altering the specific gravity of the fluid suspending the corpuscle, we can alter the condition of the vesicle

itself, by changing the proportion of its contents, in accordance with the laws governing endosmotic action, it is no longer possible to resist the conclusion that the blood corpuscle is truly a vesicle or bladder containing fluid. Experiment has shewn that such effects really occur: thus if we mix freshly-drawn blood with a solution of a specific gravity higher than that of the liquor sanguinis, we immediately observe the form of the corpuscles to alter—they become flaccid and empty, owing to the liquid of high specific gravity having drawn from the vesicle a larger proportion of fluid than it supplied to it, in accordance with the law of endosmosis. If we reverse this experiment, by mixing with the blood a solution of lower specific gravity than that of the liquor sanguinis, a contrary effect is immediately produced, the corpuscles becoming distended and rounded in a very marked degree; more fluid in this case entering the corpuscle, while but little will pass out. If to these corpuscles, so altered by the action of solutions, we now again apply these tests, but on this occasion add the solution of low specific gravity to the collapsed corpuscles, and that of high specific gravity to those distended, we shall find that we are enabled to return each specimen to its former condition, or nearly so. We can always, however, distend the corpuscles which we at first collapsed, and collapse those we at first distended, by treating them in this manner. The effects I have shewn must not be confounded with the action of simple permeation or imbibition; they have no analogy with such effects, but are results identical with those obtained by Dutrochet in his experiments relating to the action of fluids varying in specific gravity when applied to the opposite sides of the same membrane. It has been found by careful experiment that in order to collapse the corpuscles a solution of sp. gr. 1060 is required; but this acts slowly in some cases, and to produce the effect decidedly a solution of 1070, or more, should be employed. Solutions cease to distend the corpuscles when of sp. gr. 1050 to 55, and to distend them well a solution of 1015 or 10 is desirable. Now the specific gravity of the blood is about 1057 to 60; and as the corpuscles remain unaltered by solutions of from 1050 to 1060, we may conclude that the average specific gravity of liquor sanguinis lies somewhere between those two points, which it is a matter of some interest to have ascertained, as it proves that the fibrin of the blood is dissolved, and not suspended in the liquor sanguinis. For were the latter the case, the corpuscle would be rapidly collapsed by solutions of 1050, inasmuch as the serum suspending the fibrin could only have a specific gravity of 1029

to 30, and the corpuscle would of necessity contain a fluid of no higher specific gravity than this.

Having thus, I trust, proved that the blood-corpuscle possesses a vesicular structure, I shall proceed to the examination of its contents, and to describe the method of determining whether the vesicle or membrane be of a red colour, or, on the contrary, that the red colour of the corpuscle depends on the contents of the transparent membrane, the membrane itself being white. I have already shown that liquids of high sp. grav. are capable of drawing out a large proportion of the contents of the corpuscles, and so rendering them flaccid, while liquids of a low sp. grav. draw out but little of their contents, supplying to them a larger portion of fluid than they draw from within, and thus producing distension. Now this being the case, it is evident that if we obtain some means of ascertaining the colour of the fluid floating round these corpuscles, both in the distended and flaccid state, we shall (presuming the contained liquor to be of a red colour) be able to detect in one case a deep red tinting, and, in the other, a very light stain, only communicated to the fluids in which the corpuscles float. It having been proved microscopically that liquids pass in and out of the blood corpuscles in proportions bearing a relation to their sp. grav., that is to say, in accordance with the established law of endosmosis, it occurred to me that as we should be able by treating a collected mass of corpuscles with solutions differing in density, to produce the same effects on a larger scale, we ought to find that the heavier liquid, having drawn out a large proportion or fluid contents of the corpuscles, would be observed of a deep red colour, while the liquid of lighter sp. grav. having drawn out a less proportion of the contents, would be but slightly tinted, having in virtue of its low sp. grav. entered the corpuscle in large proportion, and drawn out but little of its coloured liquid. These experiments were made, and they proved in a striking manner that the liquid withdrawn from the corpuscles was of a red colour; the solution of sp. grav. higher than that of the liquor sanguinis having produced on the subsidence of the corpuscles a supernatant fluid of a deep red colour, while that of lower sp. grav. yielded a supernatant liquor of a pale rose tint. It now could no longer be a matter of doubt that the colour of the liquid enclosed by the vesicle was red, but it still remained to be shown that the vesicle itself was white; and, fortunately, we possessed an easy method of effecting this. It is well known to those who examine the blood microscopically, that when pure water is added to the corpuscles, they are at once destroyed, and the observations above de-

tailed afford an easy explanation of this phenomenon, for a rapid endosmotic action tending to fill the corpuscles must of necessity occur on the addition of water, and the delicate membrane could scarcely be expected to withstand this sudden effect, and would probably burst; at least such was the natural conclusion, on the correctness of which the success of the following experiment was dependent, it being made with a view of examining the colour of the burst cases or envelopes, which had formed part of the now disintegrated corpuscle. The experiment consisted of the following steps:—A quantity of corpuscles were allowed to subside from serum into which they had been introduced, by breaking up in it a portion of crassamentum, and then pouring it off, while containing corpuscles in suspension, leaving behind the coarser particles of broken crassamentum, which were allowed time to sink to the bottom. This mixture was set to stand during several hours, at the expiration of which time the corpuscles had collected at the bottom of the vessel. The supernatant clear serum was next poured off, as nearly as could be effected without disturbing the deposit. This having been done, the mass of corpuscles was thrown into distilled water, and this mixture set aside for twelve hours. The anticipated result was now obtained: the water had burst the corpuscles by rapid endosmosis, the burst envelopes had subsided, and were collected in a white stratum as a precipitate, while the supernatant liquid held the red colouring matter in solution,

I have as yet noticed the corpuscle only so far as its vesicular structure is concerned, but there is another point, and one of great interest, on which much light can be thrown by the last experiment.

The existence of a nucleus in the human corpuscle is a question dividing the opinions of physiologists and anatomists; nor is it a matter of surprise that such should be the case, inasmuch as the appearances presented under the microscope are such as, at a first view, entirely to discountenance such an idea; while, on the other hand, analogy would lead us to believe in a nucleus. Careful disintegration and examination of the corpuscles, however, yield appearances rendering the existence of this body more than probable. I have stated that on rupturing the corpuscles by water, we are enabled to collect a white precipitate. Now if the blood corpuscle be made up of a vesicle enclosing a nucleus, as well as a red coloured fluid, we ought (unless the nucleus be soluble) to be able to detect it by microscopical examination in the white *débris* of the corpuscles forming the white precipitate. I have carefully examined this deposit, and find it made up of three kinds of bodies:—1st,

substances quite such as might be expected to result from the bursting of envelopes, having the appearance of shreds of membrane, some corrugated, others flattened out; 2dly, white bodies, somewhat resembling the blood-corpuscles, thin at their edges, and about two-thirds the diameter of the corpuscles; 3dly, granules, probably due, in part, to serum, and I have reason to believe, in some measure, to partial disintegration of the nuclei. The solid bodies of larger size, I feel persuaded in my own mind are truly the nuclei of the red corpuscles. I have said that these bodies, as existing in the precipitate, are two-thirds the breadth of the corpuscles themselves, and it may be matter of surprise that so large a substance entering into the composition of this structure should not at once show itself when the blood is exhibited in its perfect state under the microscope, but the fact is, that the refractive power of this body is so nearly identical with that of the fluid contents of the membrane by which it is surrounded, that it is not until this condition is altered by processes such as I have described that we are enabled to detect the outline of the nucleus satisfactorily. The bodies I have just noticed as nuclei have been frequently mentioned by micrographers as “corpuscles deprived of their colouring matter,” and, indeed, they have very much of that appearance after maceration in water, being quite two-thirds the size of the blood-corpuscles, and therefore far exceeding the dimensions which most persons would be inclined to allow them. It might be asked what a corpuscle, deprived of its colouring matter, becomes? From that which I have already shown, we see that such a condition cannot well be brought about without bursting the vesicle, and allowing its contents to escape, in which case any solid capable of assuming a definite form, and observed in the *débris*, must be regarded as having once formed part of the perfect corpuscle; and it is this which I consider we must call the nucleus. Those who make a study of the microscopic characters of the blood will, I think, best be able to persuade themselves of the truth of the position I have advocated, by experimenting on the blood of birds, and comparing the results obtained with specimens from the human subject similarly treated. Thus, if a specimen of each kind be placed in a drop of water, on a slip of glass held in an inclined position, and then examined under a powerful microscope, we shall observe in the case of the blood of the bird that the well-known ovoid nuclei have escaped from the burst cases, are floating in the water, and collecting towards the lower part of the specimen, which must be examined with the glass still in an inclined position. In the specimen of

human blood similar appearances will be observed, and I feel inclined to think that a very few experiments, conducted in the manner described, will serve to convince any careful observer of the existence of a nucleus in the blood-corpuscle of the human subject.

The physical relations existing between the blood-corpuscle and the liquor sanguinis, dependent on the specific gravity and the influence of the laws of endosmose, are matters of great interest to the pathologist, and I shall therefore in this part of my lectures enter on physical considerations, and only treat of the chemistry of the subject so far as may be necessary to a full understanding of the view I am about to take. Physical conditions play a most important part in effecting the renovation of the blood, and I shall proceed to show the manner in which this function is performed. It is true that certain obvious means are adopted in order to supply the fibrinous, albuminous, serous, and saline ingredients composing the liquor sanguinis, by admitting into the circulation a liquid which is produced by the digestive process, and afterwards modified by other chylipoietic organs into chyle; but the manner in which the complicated structure of the corpuscles receives nutrition is not at first quite so apparent, though it must form not only an important part of the process, but one immediately necessary to the maintenance of life.

The analyses of chyle and lymph, the one taken from the lacteals before reaching the thoracic duct, the other from the absorbents of the lower extremity, will show you that these liquids contain a large proportion of the ingredients necessary to the formation of liquor sanguinis, and you will perceive that the lymph returning into the thoracic duct (assuming it once to have existed as chyle) has, during its passage through the organism, lost a proportion of each of those ingredients which are most necessary to supply the waste occurring in the body. The fibrinous, albuminous, serous, and saline matters, have been used in the vital processes, and all that may be again wanted returns in the form of lymph into the thoracic duct. The supply of material to the corpuscle, however, to compensate for the loss necessarily sustained during its existence in the circulation, cannot, you will perceive, be carried on with the same facility afforded to the liquor sanguinis, which at once mixes with the pabulum poured in through the thoracic duct. In the case of the corpuscle, we have an organic structure, a membrane containing a coloured liquid, which is to be constantly renovated to assist in the important function of respiration; for, whatever some modern theorists may have advanced, it can scarcely be doubted by any who are experienced in physiology that the change of colour from blue to scarlet, which takes

place in the lungs, is not a principal part in that process, and immediately connected with the absorption of oxygen by the blood. Before I describe the arrangement by means of which this red colouring matter is supplied, I must premise that this substance, which exists dissolved in the liquid contained by the envelope, is the true locus of the iron contained in the blood, the proofs of which will be hereafter noticed.

Now there are two conditions which must be fulfilled in order to supply iron to the corpuscle: in the first place, a liquid containing iron in solution must be brought in contact with it; and secondly, this liquid must be enabled to enter through the membrane freely, or it will scarcely answer the required purpose. If we regard the entrance of chyle into the blood as a means of obtaining the required condition, we shall find that we already know sufficient of the structure of that fluid to enable us to perceive how admirably it is adapted for the purpose in question. The chyle, like the blood, separates, when removed from the body, into two parts, serum and crassamentum. The former of these is a limpid fluid, containing matters intended for the supply of the constituents of the serum of the blood; the latter is a white mass, composed of fibrin intermixed with certain globules and granules.

Now the serum of the blood contains no iron, but the serum of the chyle contains it in abundance; and while the crassamentum of the blood contains iron, the crassamentum of chyle is free from it, or affords only such a trace of the metal as may be accounted for by the adhering serum. The iron of the chyle thus contained in its serum is in a very soluble form, and ready to be applied to the envelopes of the corpuscles for admission through their membranous structure; but another condition is requisite before this can be allowed, viz. there must exist a difference of specific gravity between the chyle and the contents of the envelopes; otherwise this transmission of fluid will scarcely occur, or at any rate can only be effected, after a great length of time, by the slow process of imbibition. The chyle, however, is far below the specific gravity of the liquor sanguinis, and thus, when it enters the circulation, every corpuscle with which it comes in contact will, in accordance with the law of endosmosis, immediately be entered freely by the liquid, which will mingle with its contents, and afford a supply of iron to the red colouring matter. It is obvious that this effect will not only be observed on the corpuscles in the immediate neighbourhood of the opening of the thoracic duct, for this fluid, of light specific gravity, entering the blood, will of necessity dilute the liquor sanguinis, and thus induce an endosmotic current, rich in iron, to pene-

trate into the corpuscle, further removed from the point of entrance. The equilibrium between the contents of the corpuscle and the liquor sanguinis will, in fact, be destroyed, and endosmotic currents induced. It will now at once be seen, that if from any cause the liquor sanguinis be lowered in specific gravity, or the chyle have its specific gravity raised, we can no longer expect to have a normal proportion of colouring matter secreted; and it will be hereafter my object to show the secondary mischief so induced as one of the most interesting of pathological conditions, and one which promises to throw much light on physiological questions of the highest importance. Though the exact nature of the changes which occur for the production of the red colouring matter are still involved in mystery, it is a point not altogether devoid of interest to have ascertained the manner in which one at least of its essential ingredients is supplied. This action of supplying iron to the corpuscles must of course be in active operation during their growth, and all who are familiar with the microscopic appearances of the blood must have observed that the corpuscles differ greatly in size, the smallest being scarcely half the diameter of the larger ones, and presenting a great variety of intermediate sizes. It is probably in this stage of development that the action of the chyle is most energetic.

Having now stated what I believe to be the relative physical conditions of the corpuscle, I will proceed to consider the liquor sanguinis in its disintegrated state, that is, after coagulation, when it has separated into serum and fibrin. This fluid, liquor sanguinis, was first correctly described by my esteemed friend, Dr. Babington, who, in a valuable memoir, read before the Royal Medical and Chirurgical Society, showed its true character; for though Hewson had made the observation that a coagulation occurred when the upper layer of inflamed blood about to coagulate was skimmed off, he did not draw the important inferences from his experiment which a true understanding of the subject would necessarily have brought to his mind, and it was left for Dr. Babington to demonstrate on healthy blood that which had before been observed only in its diseased conditions, and it is to him that we are indebted for that clear view of the condition of the blood while circulating, which regards it as made up of a homogeneous fluid containing floating corpuscles; for he was certainly the first to demonstrate the composition of the fluid, to shew it to be a normal constituent of the blood, and indeed to propose for it the name of liquor sanguinis. If, then, we obtain the liquor sanguinis by skimming from off the blood about to coagulate that portion of bluish

liquid observed close to the surface, we shall see that the vessel in which this is collected will very soon become coated with a layer of fibrin, and that a pellucid serum has separated from the coagulum so formed. Here, then, we have the fibrin and serum of the blood, which, together, formed the liquor sanguinis; and while the corpuscles of the blood were subsiding, we have been enabled to skim off part of this liquid in which they were held suspended.

I have now described the physical separation of the blood, not only so far as it is generally performed, viz. by dividing it into serum, fibrin, and red corpuscles, but, as I have shown, we have, by the addition of water to the red corpuscles, been enabled to divide them into their constituent parts, viz. envelope, nucleus, and colouring matter, the two former sinking as a precipitate, and the latter remaining dissolved in the water used for disintegration. This is a separation effected by purely mechanical means, and is entirely independent of the aid of chemistry. There is a further mechanical separation, however, of the serum, which we effect by simple dilution with water, so that certain constituents of the fluid existing in suspension in its ordinary state are allowed to subside, in consequence of the specific gravity of the liquid becoming lessened, and I have reason to believe that the constituent of serum thus separated occasionally plays an important part in the course of some diseases marked by an excess of water existing in the circulating blood. This solid constituent of serum, owing to its physical qualities, does not disappear with the fibrin when the liquor sanguinis becomes coagulated. It is very easily prepared: we have merely to dilute the serum with about ten times its bulk of water, and allow subsidence to take place, which occupies generally some hours. The clear liquid may then be poured off, and the precipitate thrown on a filter, and washed with distilled water.

We have now divided the blood physically into the following constituents:—fibrin, serum, suspended particles of serum, envelopes, nuclei, and red colouring matter. In effecting these separations, the evidence afforded by the use of the microscope has been indispensable, but I have not yet described all that is to be observed by the use of that instrument.

When the corpuscles are examined microscopically in recently drawn blood, we observe occasionally that semi-transparent bodies of a pale colour occupy part of the field: these are few in number, and it is frequently necessary to search over the whole of the specimen in order to obtain a good view of them. They are larger than the red corpuscles, and have been called the fibrinous globules or corpuscles. When closely ex-

amined by a good light, their surface appears granulated, and marked all over with waving shining lines. When the blood solidifies, these bodies are involved in the coagulation of the fibrin, and form a part of the clot. The use of these corpuscles is as yet undetermined: they are believed by some to be identical with the corpuscles observed in the chyle and lymph, to which they certainly bear a close resemblance; they have also been considered as capable of becoming exudation globules, such as are seen in coagulable lymph effused on granulations, and by a further change to become converted into pus globules. When blood is mixed with solutions of high specific gravity, these bodies do not undergo the collapse immediately produced on the red corpuscles; they are evidently soft solids, and require long maceration before they contract or expand by the application of solutions. When fibrin is deposited from serous fluids, or from the liquor sanguinis, these colourless corpuscles are seen under the microscope enclosed by the fibrin, and they exist in large numbers in the membranes which frequently deposit from serous fluids drawn off by paracentesis. Such serous effusions are, in fact, liquor sanguinis, but they generally contain less solid matter than the fluid of the blood.

The presence of a large number of these fibrinous corpuscles in the deposits of fibrin I have above alluded to, and more especially on healing surfaces exuding coagulable lymph, has led some to a belief that such corpuscles are produced after effusion of the fibrinous liquid, and not ejected from the vessels in the form shown under the microscope. Now it is a difficult thing to believe that a structure so well and firmly organized as the fibrinous and exudation corpuscles appear to be, should be formed by the series of changes occurring out of the body on coagulation. If such be the case, we have no fact of the kind to quote for analogy, and I do not see those difficulties in explaining the transit of such bodies through pores which refuse admission to the red corpuscles, that some consider to be valid objections to the possibility of their exudation as solids.

It would certainly, at a first view, appear difficult to explain how the red corpuscles of the blood escape extravasation, if the fibrinous corpuscles, which are larger by far, are exuded; but if we regard the organization of these two kinds of bodies, we shall, I think, at once perceive conditions rendering such an occurrence extremely probable. If we remember the physical qualities appertaining to a structure such as the blood corpuscle, we shall perceive that they nearly resemble those of a bladder filled with fluid, while the structure of the fibrinous corpuscle more nearly resembles that of a sponge, and it of necessity possesses physical qualities more

adapted to enable it to pass through an orifice of less than its own diameter. This cannot be the case with the blood corpuscle, which is unyielding until its membrane is ruptured, and its fluid extravasated. The number of fibrinous corpuscles contained in the blood may to some appear too small to account for the sudden appearance of these bodies as exudation corpuscles on a secreting surface; but here, again, a little consideration will serve to show that this idea has arisen from a comparison of their number with that of the red corpuscles, which in this respect exceed them greatly, and that we cannot positively state them to be few, inasmuch as it is difficult to draw a single drop of blood that will not show us several specimens fully developed.

OBSERVATIONS

ON THE

NATURE AND TREATMENT OF THE MORE IMPORTANT DISEASES OF THE NERVOUS SYSTEM:

With Illustrative Cases.

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[Continued from page 728.]

SECT. I.—TETANUS, AND OTHER VARIETIES OF TONIC SPASM.

CASE I.—A female, 22 years of age, came under my observation in the spring of 1820, in the sixth month (as it was afterwards discovered), of concealed pregnancy, affected with acute pain in the right hypochondrium and loins, and beneath the right scapula; the pain had been preceded by shivering, and was much increased on pressure. To these symptoms were added a pain referred to the region of the heart, extreme restlessness, nausea, and fever. The muscles of the neck were rigid, and the bowels costive.

A hot bath ordered.

The next day, continued tonic spasm, tremors of the limbs, and subsultus tendinum; the pulse 132, very hard; intense thirst; tongue loaded and parched; costiveness remaining.

Jalap and calomel; bleeding to 39 oz., when syncope supervened; the blood highly buffed, and the serum green.

After this the pain in the side and tremors were relieved. Then followed acute pain at the lower end of the chest,

in the region of the diaphragm, increased by a full inspiration; agonising pain at the neck on attempting to bend the head forwards; pains also at the sacro-iliac symphysis; the pulse 152; costiveness persisting.

40 drops of laudanum.

The 3d day, prolonged sleep after the opiate; on awaking, the pain continued as before; deglutition difficult; the muscles of the throat rigid; easy only for a short time in any position; respiration deep, 36 in a minute; pulse 144; febrile symptoms continuing.

Calomel and opium every three hours, and a purgative clyster.

The 4th, a sleepless night; opisthotonos; two scanty stools only; in the course of the day, the pain and spasms abated; pyalism from the mercury (16 grains) established; skin perspiring; pulse 148; respiration natural.

3 grs. of opium, a purgative, and a warm bath.

The 5th day, sickness in the bath, succeeded by profound sleep and snoring; the head less retracted; pain better, but much tremor of the arms; pulse 140; four scanty stools, with tenesmus; a strong mercurial fœtor in the breath. The warm bath was repeated, and death ensued in the bath. The rigid muscles instantly became flaccid.

Inspection.—The dura mater at the upper part of the spinal chord very vascular, and coated with greenish fibrine.

CASE II.—A small emaciated nervous woman, in January 1826, had dysentery when in advanced pregnancy, and in October she suffered from severe pustulous inflammation of the conjunctiva, and ulcers in the cornea, with *intense headache*, which was relieved at the end of a fortnight by repeated bleedings, calomel with opium, and purgatives. She had two subsequent attacks in November and December, but of a mild character; and in the middle of January, 1827, a fourth attack of inflammation in the cornea, with acute pain at the orbits, which was cured by a blister, purgatives, and lotions.

On April 15th, when much debilitated by grief and poverty, she became attacked, after wetting the feet, with shivering and a sensation of coldness and of *fornication* beneath the integu-

ments betwixt the shoulder-blades, with spasmodic twitchings of the eyes, mouth, tongue, and abdominal muscles, attended with vertigo, muscæ volitantes, nausea, diarrhœa, and backache; the tongue white; pulse full and quick. I saw her in this state on the 22d.

Purgatives and salines ordered, and calomel in repeated doses.

The medicine purged her freely in a few hours; the tremors, however, had increased, with most painful spasms in the legs and belly, dyspnœa, and stiffness in the jaws.

Bleeding to fifteen ounces; the blood buffy and cupped. Dover's powder, ten grains every four hours, to three doses.

The 23d, a cessation of the spasms after two doses of the opiate, but no sleep; dysury, and pain in the bowels, which had been purged; pulse 86, soft; no fever.

Calomel, antimony, and hemlock, in repeated doses.

The 24th, better. The 25th, pain in the head and belly, with costiveness.

Purgative salts, and one dose of calomel and hemlock.

In a few hours she had severe pain in the belly, and in the hind-head, with confusion of thought; the tongue was drawn by spasm; the pulse tense. The 26th, the symptoms remained.

Bleeding to ten ounces; medicines repeated.

The 27th, the head relieved, but severe backache returned; no spasms; the bowels freely purged. In a few hours palpitation of the heart came on.

Digitalis and henbane.

The 28th, palpitation relieved, but a return of headache, with stupor.

Cold lotion to the head.

30th, relieved. May 2d, the 13th day of the attack, twitching and numbness of the limbs.

Purgatives, henbane, and assafoetida.

The 3d, better after purging, yet numbness remaining.

A stimulant liniment on the spine.

The 4th, severe pain in the head and arms, twitching of the eyes, and costiveness.

Purgatives.

Then severe cramp in the belly, and in the mouth, impeding speech, and an

aguish paroxysm; the pulse very quick and tense.

Bleeding to twenty-four ounces; the blood buffed and cupped. Sixty drops of laudanum, one grain of opium, three of calomel, and six of antimony, were then given in the course of eight hours, with relief of the cramp.

On the 5th, a sleepless night from headache; thirst urgent; tongue furred; costiveness; and the pulse quick. A purgative then procured four dark stools, with relief of the head; but spasms of the abdominal muscles continued, with a sensation of coldness in the face.

Mercurial antimonial ointment on the spine. Fifteen grains of calomel at a dose.

In a few hours complete relief of the cramp, followed by sleep. On the 6th, a return of pain in the middle of the back, and at the præcordia, impeding respiration; numbness of the legs, and a feeling of loss of power, but not really a loss of voluntary movement: a tingling and spasmodic motion of the fingers and toes; the urine turbid, and costiveness since taking the calomel, twenty-four hours ago; no ptalism; pulse softer.

Inunction continued, and friction, which relieved the back-ache.

The 7th, a restless night; a feeling of creeping beneath the skin. The back pustulated by the ointment, and the pain then relieved; the mouth very sore from mercury; the bowels purged.

Remedies intermitted.

Then difficult respiration from spasm. The 8th, pain betwixt the shoulders; salivation continuing. The 9th, much better. This improvement continued for the next seven days, but the legs felt sleepy and cold. Convalescence was perfect after a month's illness.

Practical men will require no apology for the lengthy details of this very extraordinary case, which, viewed in connection with the foregoing, cannot fail to be highly interesting.

CASE III.—A gouty gentleman, in the spring, got pleurisy from cold; for which he was bled twice moderately, and blistered with relief. Having, through dread of a relapse, taken only a very slight diet, he became affected, about the twelfth day of the illness, with sudden and alarming exhaustion,

for which a large quantity of wine, brandy, and ammonia, was given; diarrhœa then supervened, and was stopped by opium and catechu; but the vital power again sunk after a fit of pain in the stomach with vomiting. After using a large quantity of Madeira, violent spasmodic action of the face and arm came on, with sleeplessness, and extremely fetid stools: he was allowed, at his own desire, a quantity of soda-water, by which the purging was alleviated; then, after stripping off a flannel shirt, he was affected with laborious breathing, and severe spasmodic action of the respiratory muscles, and with pain in the seat of the diaphragm; this was somewhat mitigated by three grains of opium, but dreadful tetanus supervened, and in a few hours he died.

CASE IV.—A married woman, 26 years of age, on November 11th, 1831, was affected with shivering, vertigo, pain in the belly, and purging. On the 13th, acute pain in the head and limbs, with vomiting. On the 14th, seen by a medical man, who ordered the head to be kept hot, and gave some cordial medicine; on the next day she was seen by another practitioner, who ordered bleeding to 12 ounces, leeches to the head, calomel, jalap, and croton oil, the bowels being very costive. The next day I saw her in complete trismus, with acute pain in the head and belly, the eyes projecting, the pupils dilated, the bowels purged.

Cupping-glasses, and mercurial ointment on the spine, antimonials, purgatives, and clysters.

17th.—Much relief after the cupping and purging; eyes and pulse more natural; and now able to open the mouth, and to speak well.

Salines with colchicum.

Convalescence confirmed in a fortnight.

CASE V.—A scrofulous girl, 15 years old, of a precocious mind, was seen by me in 1844, with the wrists affected with swelling and erythema, (without pain on movement,) the head and fingers, feet, and toes, in a state of spasmodic flexure, admitting, however, of being gently extended. She has also occasional severe spasms in the larynx, (like spasmodic croup, of which two of the family had died,) attended with a sense of suffocation if she attempted to

speak in the paroxysm, but the crowing sound was not always heard: there were also paroxysms of dumbness, in which the tongue was seen to be affected with severe spasm. These affections were intermittent, but recurred frequently. The eyes were large; the pulse, 40, small, tense; the bowels for some weeks affected with diarrhœa, and the stools devoid of bile. Menstruation for the first time occurred six months before I saw her; and it had recurred three times.

The head shaven, and an evaporating lotion applied; milder mercurial ointment, with iodide of potassium, rubbed on the region of the liver: infusion of rhubarb with alkali taken.

All the spasms ceased after applying the lotion to the shaven head; but catarrh afterwards supervened, and the diarrhœa became more severe, and quickly sunk her.

CASE VI.—A lady, about 40 years of age, was subject sometimes to hysterical symptoms and fits of loss of power over the muscles, with a feeling that she should fall if she did not instantly lie down; the limbs then became cataleptic, and fixed in the most extraordinary attitudes. She was sensible of the approach of the fits, and retained her consciousness in them. At times, when reading, the eyes would become fixed on a word, and she felt as if she could not take them off the page. In the paroxysms the pulse was weak. Large doses of cinchona were given without benefit; and in three years the disease passed into a confirmed mania.

CASE VII.*—A girl, aged 9 years, in the beginning of March, 1820, was attacked with pain in the head and left side of the abdomen, and retraction of the umbilicus; which continued for three weeks, abating only during the night: the eyes also were wild and staring, and the cornea at times turned spasmodically upwards under the orbits. In a week more she had also hysterical convulsions, and loss of speech after the first paroxysm, which continued to the next attack, and during one of these fits she lost the use of her left leg. When seen by me, under the care of a physician now deceased, on May 1st, she was affected with convulsions of the bowels, globus hysteri-

cus, blindness from the state of the eyeballs above mentioned, pain at the epigastrium; the left leg still powerless, contracted, and painful on being stretched, but not smaller or colder than natural; the bowels costive; pulse 120, small and weak. Purgatives, bleeding, and leeches to the temples had been employed.

5 grains of calomel; infusion of senna.

4th.—Copious slimy fetid dejections passed with great relief of pain in the abdomen.

Purgatives continued.

6th.—A fit of hysteria threatened, but prevented by terror; pulse 112, stronger; tongue clean. Purgatives of aloes, gamboge, and rhubarb, continued to the 12th, when the stools were more natural; the left eye then became inflamed and painful.

Leeches, a blister, Goulard's lotion, and purgatives.

25th.—The inflammation was relieved, but both eyeballs remained in the same state of spasm as before.

Extract of henbane applied for 12 hours above the right eyelid.

On the next day the lids of that eye violently opened themselves, and the pupil resumed its natural situation: the left eye remaining as before.

The henbane applied to both eyes.

17th.—Both pupils in their natural situation: the left eye again inflamed; bowels opened by the purgatives.

Leeches to the eye, the henbane and purgatives repeated.

28th.—Both eyes moveable at pleasure, and free of spasm; inflammation less; the contraction of the left leg still unaffected; copious purging from large doses of the purgative.

Lotion and extract of henbane to the eyes; the tincture rubbed on the affected leg.

19th.—After the use of the henbane the left leg became relaxed, and she could walk, which she had not done for six weeks.

20th.—Pain of the leg, ascribed to over exertion; inflammation of ball of left eye better, but its lid inflamed; motion of eyes perfect. The henbane and purgatives were continued to the 23d, when she was convalescent.

SECT. II. CONVULSIO.

CASE VIII.—A female, aged 29, was

* This case I saw in the practice of a physician deceased.

affected at the beginning of 1827 with symptoms of croup (as it was thought by her surgeon, who bled her for it); and in September with loss of voice, which continued to December 4th, when she came under my care, complaining also of a sense of difficulty in swallowing at the cricoid cartilage, and a feeling of a lump at the larynx, with rapid and violent respiration, in the form of quick and incessant panting and sighing, with a dull murmur in the trachea. On making the effort, she could utter a dull voice, but she could not command the diaphragm so as to speak plainly, and the attempt excited pain at the præcordia; she had also severe pain at the margin of the ribs, and in the back, apparently in the region of the diaphragm, and she could not lie on the left side; no cough; the pulse quick and tense; the appetite ravenous. She had intermissions of the panting for a fortnight at a time, but the loss of voice and pain at the præcordia were constant. The paroxysms were singularly periodical, coming on a Saturday, and going off on the Monday week following. (The patient a person of credible character.) The present fit came on a few days ago, during menstruation, as was usual in former fits. The panting ceases only on sleep; the menstrua are irregular in their continuance, and generally scanty; the bowels costive; the tongue white; no fever; no sore throat. She has used a blister.

Calomel, with opium, to salivate; salines; a blister on the præcordia.

The 7th, still much pain and tenderness at the sides of the abdomen; occasional pain in the head, neck, and back; sleep disturbed; the sighing and panting violent and incessant; voice stronger; bowels purged of dark slimy stools; no salivation from eight pills.

Medicines as before; Ung. Hydrarg. Camphoratum cum Belladonna.

The 9th, breathing less rapid and less violent.

10th, the fit ceased suddenly, having lasted ten days; still much tenderness at the præcordia, and sleep troubled; pulse 60; bowels regular; mouth sore from the mercury.

Infusion of gentian, and valerian, and camphor; friction of the back and sides.

The 17th, slight tenderness at præcordia; else quite well.

Compound scammony powder, with aloes; quinine with valerian.

She says that the disease has intermitted on former occasions without using medicine. It comes on generally a day before the menstrua, beginning with a frightful dream. She has had seven paroxysms in the last eight months.

Jan. 1st, 1828.—At the end of the month the paroxysm returned, and was arrested suddenly on applying twelve leeches to the throat. It again, however, occurred for three successive months, when she was bled; after which it ceased for nearly two years, and her general health was good. At the end of December, 1829, it recurred in the usual manner at the menstrual period, the menstrua being scanty; and it intermitted at the usual time. She was premonished of the attack by a loss of feeling in the face and limbs, so that things dropped from the hands, yet no loss of muscular power; she had also disturbing dreams, and habitual costiveness.

On February 10th she was attacked with vertigo, loss of voice, a spasmodic action of the lips, so as to whistle clearly and involuntarily; the breathing very quick, with a frequent full pulse; menstruation just now ended, and scanty; bowels costive.

Bleeding; purgatives; rest in bed.

The 12th, great and sudden relief after the remedies.

Cupping-glasses on the neck; antimonial ointment on the shaven occipital region; purgatives of blue pill and aloes.

In March she was well.

CASE IX.—A lady of superior mental powers, and strong muscular energies, in the beginning of 1842, after protracted mental and bodily exertion, caught a feverish cold, which was followed by severe symptoms, regarded as hysterical, for which tonics, camphor, and wine, were employed. After four months her health improved, and continued so to the following spring, when a similar attack recurred, and lasted again for four months. The menstrua were usually regular, sometimes copious, and attended with "nervousness" and headache; the bowels habitually very costive, and she was liable to sudden "fainting fits," in which the muscular powers were more affected than the pulse. In February,

1844, after a cold, she was again the subject of severe convulsions, resembling hysteria; and the functions of the liver and bowels were very imperfect. Her medical attendant prohibited all cordials and high living, cut off the hair, applied a cooling lotion and leeches occasionally, and gave prohibitory purgatives, with the best effect at the end of three weeks. After this, as the convulsive fits were at times severe, and the system seemed weak, calumba with ammonia was given, and then nitric acid, and acetate of morphia, not neglecting aperients. By these means she escaped the fits for a fortnight, and was able to enjoy exercise in the open air in a wheel chair. At the beginning of April she was more particularly under my observation; the natural functions were much improved, but the tongue remained very white, and the pulse small and quick. When I visited her she was in the horizontal posture, which she thought herself obliged to retain, in order to keep off spasms and an uneasy feeling in the head. On raising herself, at my request, she became suddenly affected with a violent spasmodic action of the head and arms, whirling the body around on the face, without loss of consciousness or hearing; this fit was preceded by a feeling of furiousness, as if an irresistible impulse came over her; in ten minutes she regained her usual state. She believed that the effort to rise, on being requested to do so, and not any mental emotion, was the cause of the fit; yet she could at times, when a spontaneous desire led her, rise from the sofa and walk across the room; she could also dress herself, and sit some time on the *chaise percée*, without inducing the fit.

The disorder was considered to arise from vascular fulness, and irritation at the cerebellum and encephalic portion of the spinal chord, and not to be of a nervous hysterical character. Mild doses of calomel, with soda and aperients, were ordered, and a succession of blisters on the neck and occipital region alternately; the cooling lotion on the shaven head continued, and a few leeches occasionally. On the 7th she was better. Once the fit had returned from fixing her eyes intently on an object. The torpor of the bowels required stronger purgatives; the uneasy feeling in the head was always

relieved on resuming the horizontal posture. On the 29th her state was improved, and she had enjoyed the chair exercise; but the paroxysm was brought back on a molar tooth being extracted. In a few days the fit returned severely, from the irritation of boils induced by the repeated blisters.

On May 7th, during my visit, she was again affected with a severe convulsion, turning the body impetuously round on the right side, as was usual. She does not know at the instant what she is about to do, but feels in a fury, and says that the movement is irresistible. Leeches and iced water had given sensible relief to the head; and when out of doors in the chair, she could get out and walk; but when in the house she was obliged to lie incessantly flat on the sofa. A weakness and dull aching of the right arm and leg were now complained of, which had existed slightly for many months, with a feeling, on sitting in a chair, that she should slide down towards the left side; and this leg is also colder and less sensible than the left, which she calls now her "well side;" she has also some difficulty in controlling the thoughts; the tongue more furred and white; some uneasy feeling in the head this morning, which was relieved after the convulsion.

In a few days she had an ordinary hysterical fit, from mental excitement. It was then determined to discontinue the cold to the head, to give the compound rhubarb pills, and half a grain of extract of belladonna, thrice a day. After this a change was obvious in the character of the disease; the spasm was less violent and less frequent, and slight hysterical symptoms succeeded; there was also slight narcotism from the belladonna. On the 18th, the liver being torpid, the narcotic was exchanged for alteratives. The right limbs were now less paralytic, but the thermometric temperature of the right leg, that is, of the affected side, as observed twice a day for a week, was oftentimes ten degrees higher than that of the left; *e. g.* the right leg 90°, the left 81°; or the right 80°, the left 71°; and afterwards the heat of both legs became equal, with a corresponding improvement in other symptoms, except that a departure from the horizontal posture could not be borne. In June there was a considerable improve-

ment, but still a sense of weakness and aching in the right arm on using it much in straw-platting or writing; and the left leg now felt hotter than the right. Her general health was good. On one occasion a severe convulsion was brought on by placing her on an inclined plane, and in it the pulse became very low; it was preceded by a feeling of choking in the throat, and of heat about the head, and a quivering of the eyebrows and eyelids. On fanning her, also, another slight fit occurred. Her cheerfulness and mental energies were now as great after the fit as before it; formerly the paroxysms were followed by exhaustion.

The shower-bath and enemata daily; and many hours to be passed in the open air.

I afterwards consulted my valued friend the late Dr. Abercrombie, of Edinburgh; and at his suggestion a crucial incision was made in the scalp, at the side of the hind head, where a tender spot was found, and an issue established; extract of stramonium was also given, and the bowels kept acting by aloes. After this she was entirely relieved of headache, from which she had long suffered more or less; and the spasms very much subsided,—but an attempt to grasp any object firmly with the right hand would induce a threatening of them.

At the middle of July small doses of the citrate of iron were given, for debility; and when combined with blue pill and colocynth, the tonic suited well. She was then taken to the seaside for a month; the issue kept discharging; the shower-bath and medicines continued; and to the end of November her amendment was gradual and satisfactory, yet still not amounting to recovery.

[To be continued.]

TREATMENT OF FISTULA IN ANO BY LIGATURE.

To the Editor of the Medical Gazette.

SIR,

I BEG leave to submit the following method of using the ligature in the treatment of fistula in ano, in the hope that it may be acceptable to some of your readers.

I have made trial of this plan during the last twelve months, the results of which, if worth notice, I hope to communicate at a future season. I employ a fine metallic wire of silver or platinum. Having passed a probe director (one of Sir Benjamin Brodie's) along the fistula and through its internal orifice, its point, being very flexible, is readily directed downwards and out at the anus by the finger previously introduced within the rectum; the structures to be divided are now upon the instrument, and, as it were, everted. The wire is then passed along the groove of the director, and the ends are twisted together until a very moderate compression is exerted upon the enclosed parts. It promotes the personal comfort of the patient to leave the twisted ends rather long, and to fix them on the sacrum with a cross slip of adhesive plaster. This trifling arrangement allows the buttocks to lie perfectly apposed, and he (the patient) is free from the disagreeable sensation of an interposed body or rough point, and visits the closet more comfortably. All that remains to be done is to twist up the ligature as it becomes slack, and in a week, or a little more, it is free. I do not confine the patient altogether: it is, however, advisable to keep him on the sofa for the first twenty-four hours, as erysipelas might arise in a bad subject, and also to limit his movements considerably during the entire treatment.

I forbear at present from entering into any detailed consideration of the merits of this method. Any advantages it presents must be obvious to every surgeon. I may, perhaps, remark that I have found no strong reason to prefer it to the knife, and I think that the plan of presenting the parts for division upon Sir Benjamin Brodie's probe director, and dividing them with a good sharp bistoury, not with scissors, as he recommends, is an operation so short, simple, and effectual, as to leave nothing more to be desired; and I am furthermore of opinion that we are much indebted to that gentleman for having so simplified the treatment of fistula, especially in that class of cases where long sinuous tracks have been permitted to form.—I am, sir,

Your obedient servant,

JOHN LOMAS.

Manchester, March 6, 1845.

ON THE
IMPORT AND OFFICE OF THE
SEROUS MEMBRANES.

By R. WILLIS, M.D.

(*For the London Medical Gazette.*)

WHEN we contemplate the general arrangement of the organs which compose the bodies of the more perfect animals, we see particular care taken that one part should be separated from another by intervening spaces, or cavities, as they are called; that wherever there happens to be any considerable thickness of parts, these should either be surrounded by the common integument, or should be partitioned off from one another, and their surfaces invested with a delicate membrane of the particular order characterised as serous membranes.

It is not very obvious, from aught we know, wherefore the brain should have been inclosed within a serous cell, as we find it; and still less wherefore it should have been formed with an extensive cavity in its interior. I venture to say as much in regard to the viscera of the thorax and abdomen generally: it is not very evident why the heart and the lungs have been hung loose within especial sacs; wherefore the liver and spleen are suspended from the top and side of a great cavity. The usual interpretation of the arrangement observed in the visceral cavities is, that all exists for the sake of facilitating motion. But there is no motion or gliding of parts on one another within the cranium; the lungs glued to the walls of the chest would have followed the ribs in their rise as certainly as they do according to the arrangement as it now stands; even the heart in its action does not move through a space nearly of the same extent as many of the long muscles of the limbs in their contractions—the biceps brachii, the sartorius, the gastrocnemius, for example, which are all nevertheless connected at every point, by means of cellular tissue, with the parts around them. The intestines, indeed, could not very readily have propelled their contents had they been less free than we find them. But the liver and spleen needed not, apparently, to have been placed in the same circumstances as the intestines, *i. e.* hung

loose into a cavity, being connected with the body by but a small part of their surface. They have no movements to execute, and they might, we should suppose, have as well been excluded from the peritoneum, and braced down in their seats behind it, as we observe the pancreas and kidney to be. Doubtless there is a cause for, an end to be answered by, the arrangements particularly indicated, over and above any that may perchance be connected with the making motion more easy. What may this cause, what may this end be?

I am disposed to view the serous membranes as internal substitutes for the external common integument, and the fluid that perpetually bedews the surface of these membranes as having the same effect as the perspiration, the purpose of the cutaneous exhalation and of the serous exudation being identical; viz. the preparation of the conditions by which the fluid shed from the capillary arteries finds its way, in principal part, back into the circulation.

In a previous paper, on the Special Function of the Skin, I have shown the influence which the extensive system of sudoriparous glands exerts in this direction, by dissipating so much of the watery element of the blood. With regard to the serous membranes a different arrangement was required. The exudation from them cannot pass off in the form of vapour into the atmosphere; it is, therefore, collected and carried away by a set of vessels especially provided for the purpose, being imbibed or taken up by them in virtue of a general physical law. These vessels are the absorbents, which, as complementary to the veins, are in particular relation with the watery parts of the plasma, or liquor sanguinis, which passes through the parietes of the capillary arteries at every point, charged with the elements of nutrition appropriate to all the tissues composing the body. These tissues select what they require from the plasma that bathes them, and, at the same time, doubtless set free certain effete matters—carbon in the form of carbonic acid, hydrogen in the shape of water and of bile, and azote in the fashion of urea, all of which, dissolved in the lymph, are taken up by the absorbents, and, being thrown into the general current of the

circulation, are by and by sent for elimination by organs especially destined for the purpose—the lungs, the liver, and the kidneys.

Nutrition, in this view, presents itself to us under the aspect of an universal secretion; the fluid contained in the lymphatic vessels may be regarded as the product of the peculiar vital act that is performed by each constituent atom of the body, in the same way as we look on the urine as the product of the peculiar vital act of the kidney, upon the bile as the product of the peculiar vitality of the liver, and so on. The walls of the absorbent vessels have an affinity for the watery fluid with which they are bathed, in the same way as the empty intestine of an animal placed in water has an affinity for that fluid, and becomes distended with it. Abstracting watery fluid, they have the effect of rendering the current of blood which is returning to the heart more dense than that which is quitting it, and so secure the perfect drainage of the tissues at large by the medium of the capillary veins; for the lymphatics themselves do not appear in any case to penetrate the substance of organs, and are nowhere of dimensions so minute as to make them invisible to the naked eye.

The relations of the absorbent system at large with the capillary circulation, and its subserviency to preparing the conditions by which the endosmotic transference of fluids from the outgoing to the incoming currents takes place in internal organs, appear to be particularly indicated by the manner in which it is finally connected with the blood-vessels. The watery fluid appropriated by the absorbents is not poured into the veins in the vicinity of the parts and organs where it is collected: this would have had the effect of attenuating the returning current, and undoing all that had been done; it is only restored to the blood as the common torrent is entering the heart, at the nearest eligible point, it may be said, to that organ, from which it will be immediately sent to undergo exposure in the lungs, and besides the special purgation which it then receives, to lose so much water as will give the blood of the pulmonic veins a somewhat greater density than that of the pulmonic artery, and so effect the drainage of the delicate tissue of these

organs; this is, in fact, probably the end of the pulmonary exhalation which, as is known, amounts to several grains per minute, to several ounces in the course of the four-and-twenty hours.

These views of the end and office of the absorbent system displayed upon the serous membranes, and of these membranes themselves, as contrivances for accommodating absorbent vessels—seem to acquire support from the singular development of the absorbent system, which we observe in tortoises, lizards, and serpents, in which the common integument is obviously unfitted for the elimination of water. Whether there be a corresponding increase in the number and magnitude of the absorbent vessels in higher animals covered with a horny or imperious integument, such as the manis and armadillo, I do not know, but I should anticipate that there was.

The object of this short note being physiological, I but allude in very general terms to the singular amount of disturbance which ensues in the system generally upon any implication of the functions or structure of a serous membrane—upon inflammations, adhesions of opposite surfaces to one another, &c. &c. The mischief in such circumstances is commonly ascribed to interference with the motions of the organs implicated; but it certainly depends in a much greater measure upon something else: the nutrition, the vitality of the organs concerned, are compromised; the conditions essential to the access of the nutrient fluid, and to the removal of effete matters, are interfered with, and hence it is that we have the great amount of general constitutional disturbance first, and the constantly fatal effects in the end, which accompany lesions of the serous membranes.

PECULIAR FORM OF DISSECTING ANEURISM OF THE THORACIC AORTA.

By ROBERT L. MACDONNELL,
Licentiate of the King and Queen's College of Physicians, and of the Royal College of Surgeons, Edinburgh.

A WOMAN, about fifty years old, an inmate of the South Dublin Union, got permission to go out into town, and remained absent for six or seven hours.

On her return in the evening, she ate her supper as well as usual, and nothing remarkable was observed about her. She went to bed at the usual hour, and slept well till towards morning, when she awoke, complaining of excruciating agony in the epigastric region. The resident medical officer visited her, and from the fact of her being subject to attacks of colic, ordered her an anodyne draught, and warm stupes to the abdomen. In about an hour after his visit she suddenly expired; and on examination, the following appearances were detected:—

The pericardium, on being opened, was found to contain about four ounces of serum, tinged with blood, and some coagula; the membrane was, in other respects, healthy and free from any trace of chronic or recent inflammation. Toward the apex of the pericardium, we were struck with the remarkable appearance presented at the origin of the great vessels, where there was a large and firm mass of coagulated blood completely surrounding them, and bound down by the thin layer of serous membrane, which passes up from the heart along the vessels, to be reflected on the fibrous layer of the pericardium. This coagulum was firm, of a dark colour, and uniform consistence; the membrane covering it was quite transparent. We next cut into the left ventricle, which was both dilated and hypertrophied, and then we slit up the aorta as far as the descending portion. The semilunar valves were all in that condition termed atrophy, viz., they were perforated in different parts, but more especially towards their free margins, with small, round, and oval-shaped holes; and in other situations they were very much thinned. The aorta, in the situation of the attachment of the valves, was healthy; but about an inch from this situation, we discovered a laceration extending transversely, and with edges as well defined as if cut with a scalpel; it penetrated the internal and middle coats of the artery, but left the external one quite whole; it was one inch and three-eighths in extent, and from it a probe could be passed downwards, between the external and middle coats, as far as to a level with the upper border of the semilunar valves; but farther than this, *i. e.* behind the sinuses of Morgagni, it could not be passed. The

orifice of this slit was partially closed by a coagulum of pale fibrine, and on tracing this up we found that it lay between the external and middle coats of the vessel, but did not extend far, and was not attached. We then passed a probe upwards, and found that it advanced as far on the right side as to the division of the innominata, and for about half an inch along the course of the left subclavian and carotid arteries, to which extent the middle tunic of these vessels was separated from the outer one; but the space was not occupied by a coagulum, it appeared as if the separation had been the effect of a violent pumping of blood between the coats of the vessels, which had afterwards burst into some other situation, leaving this space empty except towards the laceration, where, as I before stated, we found a pale fibrinous clot.

On proceeding with the dissection, we found the opening in the cellular coat, through which the blood escaped; it was round, about the size of a fourpenny-piece, and was filled with a dark coagulum, which extended downwards, closely embracing the aorta, and separating this vessel from the pulmonary artery at the exact point where, in health, they lie in apposition. In this situation the coagulum exercised a considerable compression on the pulmonary artery, by which the vessel was much flattened. The coagulum lay beneath all that portion of the reflected layer of pericardium, extending from the *zonæ tendineæ* of the right and left ventricles to where it is reflected on the under surface of the fibrous layer of the membrane. The serous membrane was perfectly whole, except at a small point corresponding to the junction of the right ventricle with the left auricle, where there was a small aperture through which the small quantity of blood in the bag of the pericardium had evidently escaped. The clot was hard and solid, and was fixed in its position, from its being completely entangled in the cellular tissue lying between the serous membrane and the outer coat of the arteries, and between these two vessels at the point where the pulmonary artery passes anterior to the aorta; in this spot the coagulum was thicker than in any other.

The coagulum occupied exclusively

all that space external to the vessels, and underneath the serous membrane; it passed downwards on the auricles to where they join the ventricles, and it also passed some way upwards, beneath that membrane which anatomists describe as descending from the deep layer of the cervical fascia, to become continuous with the fibrous layer of the pericardium.

In other respects the aorta was extensively diseased, being thickly coated from the commencement of its transverse portion, all along its descending course, with bony plates and atheromatous deposits. Indeed, the only part of the artery which appeared free from this disease was the very situation where the laceration took place; for immediately to the left of the opening there was another large osseous deposit. On comparing the middle and internal coats of the artery, at the seat of rupture, with other parts, they were found to possess scarcely half the thickness, and were much more friable, though the vessel did not present, in any part, traces of acute inflammation. Towards the commencement of the arch the vessel was somewhat dilated, but not to a greater extent than is ordinarily observed in individuals of her age.

The mouth of the innominate was filled with a dark and firm clot, which extended for some distance along this vessel and its two divisions, and appeared to have been produced by the mechanical pressure exercised on it by the clotted blood which lay between its outer and middle coats. The lungs and liver were greatly engorged, no doubt the result of the mechanical pressure exercised on the veins leading from them, and of the almost complete obliteration of the cavities of the auricles.

ON THE MEDICAL AGENCY OF WATER AT DIFFERENT TEMPERATURES.

By DR. WILKINSON, Bath.

(For the Medical Gazette.)

HISTORY informs us that in the most ancient periods ablutions were considered so conducive to health, as to constitute an important part of religious ceremonies; emblematical of

mental purity. Most probably the custom was first adopted in warm climates, and from the salubrious result became sanctioned and enjoined by many religious institutions: thus it was not only adopted in Mosaic and other ceremonies of worship, but also the early Christians, previous to partaking of the holy communion, purified themselves by ablutions with water.—

In a state of health every part of the animal frame has its determined laws of capacity for caloric and electricity; and in every local or general deviation a change in these active agents takes place. A restoration to health can only be contemporaneous with that state of organization the body originally possessed. In cases where caloric becomes morbidly liberated, in partial or general currents, practical medicine makes use of cold media, in a highly rational manner, to promote the required material change. This occurs during certain morbid conditions in the substance of the centre of the apparatus of motion in the body, when a glowing heat and a rapid current of blood towards the head point out an abnormal metamorphosis of the brain; and when this condition continues beyond a certain time, experience teaches that all motions in the body cease. In such extreme cases every practitioner knows that by surrounding the head with ice the temperature soon becomes lowered; and the ice should not be removed before the liberation of heat has accomplished the restoration of the natural temperature.

In my future observations I shall attempt to more minutely explain the powerful agency of the active imponderable principles—caloric and electricity—in various functions of the animal economy, at present confining my attention to the relative proportion of caloric, or the matter of heat in ice and water. It has been ascertained, that if any given weight of ice, at 32 degrees, be mixed with a corresponding weight of water at 172 degrees, the ice will be melted, and the resulting fluid mixture will be at 32—the water having lost 140 degrees, and the ice, during its conversion into water, having acquired this portion of heat. The same principle applies to the human body in every altered state of structure or arrangement. Caloric is either in excess or diminution, and its equalization

should be the first object of medical attention. Every person who has recourse to ablution, in a morning just after rising, well knows its beneficial effects: the cuticular surface is preserved in good order, and all irregularities as to temperature corrected. For the purpose of ablution, a convenient apparatus is made of tin or zinc, from 4 to 6 feet in diameter, and about 6 inches deep. In the centre the individual stands, and with a large sponge applies the water freely to every part of the body, which is afterwards to be well dried. The coarser the towel used the better: if the weather should be very cold, the temperature of the water may be a little increased; but the colder, the more powerful the reaction. An apparatus for ablution thus constructed can be conveniently introduced into a bedroom, with the advantage of its use on the moment of rising from bed, which is the best time for its employment, and the refreshing result is highly conducive to the preservation of health. In debilitated constitutions, when the action of the douche is found too powerful, then ablution constitutes an excellent substitute, gently rubbing all the parts particularly affected, and preparing, if required, for the subsequent application of moisture. When dressed, it is always well to drink about half-a-pint of cold water, and if weather permit to take a long walk before breakfast. By this process all that languor which results from excessive perspiration is most effectually removed.

In tropical countries it has long been the practice of professional gentlemen in febrile diseases to dash cold water over the patient, morning and evening; and particularly if the fever have a typhoid character, and is accompanied with a diminution of nervous energy. Dr. Currie most successfully introduced at Liverpool the affusion of cold water in the treatment of this species of fever. His mode of application was by pouring two or three quarts on the patient's head and body: he confined this practice principally to the low contagious fever, and selected the early stage of the greatest heat; but recommended water not to be applied when the patient was in a state of chilliness, even if the thermometer indicated a preternatural degree of heat, nor in a case of fever arising from or accompanied by topical inflammation. It is

greatly to be lamented that, from inconvenience attending affusion, or any supposed fatigue, this excellent mode of practice should be so rarely adopted, and particularly when so much benefit is quickly derived from it. In cases when the skin is hot and dry, or the pulse exceeding 120, the tongue parched and discoloured, how grateful to the feelings is the cold affusion: the heat of the body is rapidly diminished, the irritating dryness of the skin is removed, and the pulse reduced to that standard which allows of a quiet slumber and a gentle perspiration. Whenever the pulse exceeds 120, it may be generally concluded that its frequency is the result of constitutional debility; the reduced energy of the heart compensating for power by more frequent feeble pulsations. On the prevalence of this species of fever at the Foundling Hospital, my medical friend, Dr. Stanger, more than 40 years since employed, with the greatest success, this cold mode of treatment; and although by practitioners of eminence stimulant remedies were found highly pernicious, yet cordial and tonic medicines by many have been employed, combined with the opposing principle of abstraction of blood.

We have varying opinions relative to the agency of cold water in some neuralgic affections. Dr. Watson says that a tetanic patient in St. Thomas's Hospital, at his own desire, was plunged into a cold bath, and instantly died. Sir James Macgrigor observes, that during the campaign in Spain, the warm bath gave only momentary relief, and the cold bath was worse than useless. But Mr. Abernethy stated, that were he himself the subject of tetanus he would have the cold affusion tried.

SOME OBSERVATIONS
ON THE
MEDICAL TOPOGRAPHY, CLIMATE,
AND DISEASES,
OF THE
BIGHTS OF BENIN AND BIAFRA,
WEST COAST OF AFRICA.

BY W. F. DANIELL,
Member of the Royal College of Surgeons of
England, &c.
[Continued from p. 709.]

NOTWITHSTANDING the conflicting statements that have been promulgated

from time to time respecting the salubrity of several rivers and other places frequented by the white traders in this portion of Western Africa, the Rio Formosa will be found upon dispassionate inquiry to be the most unhealthy. The only streams in the Bights which resemble it in point of insalubrity are the Rio Nun and New Callabar; but the sacrifice of European life in them, although considerable, falls short of that observed in the Benue river. The constant prevalence of a class of insidious febrile diseases, (particularly remittent fevers,) whose adynamic type, rapid career, and other pathological features differing so greatly from those of other tropical climes, sufficiently stamp it with that odious celebrity now widely diffused and too justly merited. Our colonial settlements in the Gambia and Sierra Leone, from the severe ravages of occasional epidemics, have also been invested with a certain degree of ill fame; but they, if placed in comparison with the river I have been lately describing, would be deemed far more salubrious. It must, however, be borne in mind, that while these maritime districts are thus abundantly fraught with those influences which give rise to this unfavourable condition, their deleterious effects have been much augmented by a series of petty and vexatious annoyances to which all Europeans are subject who come within their sphere. The slimy mudbanks and alluvial swamps, it is well known, generate myriads of musquitoes and sandflies, and these insects so vigorously attack all who reside where they abound, as to prove exceedingly troublesome. In vain the wearied seaman seeks for repose; his winged tormentors multiply as the night advances, and, ever on the alert, incessantly hover around him, until he is at length forced to succumb to their harassing inflictions, and unwillingly hastens upon deck, there to await, in no happy mood, the break of morn. Heavy toil by day, with broken and unrefreshing slumbers, will soon undermine the strength of the most hardy; and hence it is that these, in conjunction with other apparently trivial causes, amply predispose the unseasoned stranger to the attacks of endemic typhoid affections, from which so few have as yet recovered. Barbot, in allusion to this subject, truly re-

marks, "that the lands on each side of the river are very woody, which breeds those tormenting vermin in such immense numbers, that they attack our sailors at night on all sides, and so pester them, that many the next morning are not to be known by their features, depriving them at the same time of their natural rest, which, together with the unwholesome air, occasions a great mortality among our Europeans, some sloops or ships in one voyage often losing one-half of their crews, and others more, and the survivors remaining very weak and sickly, which strikes such a terror into sailors that few are willing to serve in such voyages, and the boldest always afraid of their lives*."

When I visited this river in 1839, I found two vessels moored a short distance from its mouth, one of which, within the space of five months, had buried two entire crews, a solitary person alone surviving; the other, which had entered at a much later period, had been similarly deprived of one-half of its men, and the remainder were in such a debilitated condition as to be incapable of undertaking any active or laborious duty. Another vessel sailed from this port, previously to my arrival, in such a deplorable state as to be solely dependent on the aid of Kroomen to perform the voyage homewards. After a stay of several weeks at the anchorage opposite Jacqua creek, the ship to which I was attached became so unhealthy that we were under the necessity of recrossing the bar into a purer atmosphere, having lost one-third out of a complement of eighteen men. And yet, amid these regions so rife with disease and death, I have known Europeans reside for a number of years in the enjoyment of good health, from the simple secret of moderately conforming to the habits of the natives as regards the diet, exercise, and attention to the due performance of the cutaneous functions. The plan of treatment I then pursued in the cases of fever which came under my care, was local and general blood-letting, saline purgatives, calomel in large doses, &c.; in fact, that treatment sanctioned by the most experienced writers on tropical diseases of a similar nature. I regret to state that in these, as in numerous

* Description of the Coasts of North and South Guinea, book iv. p. 319.

other instances, this system of treatment was evidently one which possessed no power of controlling the progress of the remittent fevers of inter-tropical Africa.

Perhaps in no part of the African continent is the medical profession held in higher estimation than by the negro tribes of the kingdoms near the sea-coast. In most of the rivers of the Bights the medical officer, if he were so inclined, could easily convert his ship into a lazarette, from the influx of patients that would voluntarily place themselves under his sanitary regulations. Natives of every rank express the greatest confidence in his skill, and the efficacy of those remedial measures exhibited for their benefit; and should such unfortunately fail of affording the desired relief, the case is considered by them as hopeless. Whenever, therefore, the surgeon of any vessel is known to be somewhat liberal in the distribution of his medicines, innumerable invalids flock on board, and, without hesitation supplicate his attention to their real or imaginary complaints; and many urge their claims so cogently that it requires no small amount of patience and firmness to withstand their importunity. Medical science in Soudan, and other inland countries, is also fully viewed in the same favourable light; and the white practitioner, if the assertions of travellers are to be credited, is considerably treated with kindness and hospitality. Clapperton pays an honourable tribute to its utility and value when he states, in the following passage, "that the news of our arrival spread before us, and at the different towns and villages through which we passed they brought us all the sick to be cured. Nor was it the sick alone who sought advice, but men and women of all descriptions; the former for some remedy against impotency, the latter to remove sterility. Many came for preventives against apprehended or barely possible calamities; and, in anticipation of all the imaginary ills of life, resorted to us in full confidence of our being able to ward them off." By the population of some countries the sources of disease are attributed to supernatural agency. In Warree, an evil principle, designated by the term Mallakew, is supposed to live in the

waters of the river, and to afflict all who have not paid a proper deference to his power by appropriate propitiations. Fowls, sheep, &c., and sometimes human beings, are immolated for this purpose.

Fourteen miles S.E. by S. from Beniu river, is the Rio Esclavos, or Slaves' river, known also in native parlance by the name of El Broder, or Brodero. It is considerably inferior to the Formosa in magnitude, but like it is obstructed by a bank of sand that debars access to any but vessels of light tonnage. Adjoining its entrance, is a small town, erected on the margin of a sandy beach, and which is encompassed and partially hid from view by a profusion of palm and cocoa-nut trees. The Rio dos Forcados, or Galley Slaves' river, usually termed the river Owerree, or Warree, is fifteen miles further to the southward. Both this and the Esclavos, from their shallow estuaries, are seldom or never frequented, unless it be by slave-ships, although in the seventeenth and eighteenth centuries the Portuguese and Dutch carried on a lucrative commerce with them, especially the latter. At the distance of three miles from the entrance is the island and town of Paloma, the latter consisting of from twenty to thirty dilapidated houses, situated on the left bank of the stream. The inhabitants transmit what little palm oil they produce to Jachree; the majority of them in are now fishermen, and chiefly occupied the curing of fish. Formerly the Portuguese had a fort, chapel, and three or four factories, in this town; but they were soon abandoned on account of the extreme insalubrity of the climate. Jerome Merolla da Sorrento, in his voyage to the Congo, informs us that two Capuchin missionaries, named B. di Firenze and A. Avaccio, sailed from the Island of St. Thomas, in 1683, to visit the metropolitan town of Warree, which by this route is about sixteen miles to the north-east of Paloma. They were the first persons that attempted to introduce Christianity into equatorial Africa, and, it has been stated, converted many of the natives to its doctrines. The people of this and the circumjacent countries were called by the ancients Derbiei Ethiopes.

The Rio Ramos, or Bough river, is seventeen miles to the northward of that of Warree, and the river Dodo

* Journey from Kouka to Murnur, p. 23.

twenty miles E. by S. from the R. Ramos. Neither of these streams are visited, except by contraband schooners for human cargoes, and to elude the vigilance of the men-of-war cruising without. Thirty miles south-east from the Dodo is the river Sengana, or Segma, at the aperture of which may be distinguished several isolated groups of mud habitations. The land here is very low and marshy, and the inhabitants are such a degenerate race, that they appear in physical conformation to be but a few degrees removed from the higher animals of the Simiæ family. None of these rivers offer any inducement for the white trader to enter them, and are alike inimical to his health and safety. An insignificant point may be noticed a few miles to the northward of the Sengana, which has been commonly, but erroneously, named Cape Formosa. It is in $4^{\circ} 31' N. Lat.$, and $5^{\circ} 41' E. Long.$ The river Sengana is the southern extremity of the Bight of Benin, and the obvious projection of the land in its vicinity may therefore be termed, with more propriety, the cape. This Bight comprises a tract of coast of nearly 360 miles in extent, and, excluding some parts of the Slave coast, may be merely considered as one vast and almost interminable forest swamp, whose continuity is broken by the petty rivers and creeks that meander in all directions through it. It is without exception the most deadly portion of the West coast of Africa.

[To be continued.]

ANALYSES AND NOTICES OF BOOKS.

"L'auteur se tue à allonger ce que le lecteur se tue à abrégé."—D'ALEMBERT.

The Chemistry of Vegetable and Animal Physiology. By J. D. MULDER, Professor of Chemistry in the University of Utrecht. Translated from the Dutch, by Dr. FROMBERG, First Assistant in the Laboratory of the Agricultural Chemistry of Scotland. With an Introduction and Notes, by JAMES W. JOHNSTON, F.R.SS. L. and E. Part I.

HERE is a book of much promise upon a very difficult and important object, written by a very distinguished investigator of organic nature, and translated under the auspices of an able

English chemist; and yet with all these advantages it will give little satisfaction, so far as it has proceeded, to the practical-minded men of this island. The introduction is not prefixed by Dr. Johnston, as he had intended, but is withheld till the whole original work shall have come into his hands. Of the part published, containing 184 pages, the first 85 are occupied chiefly with hazy metaphysical reveries, which lead, as far as we can guess, to no useful applications, whether in chemistry, physiology, or agriculture. The very first opening of his subject reveals his tendency to the transcendental.

"In the doctrine of life, no position has been more strenuously maintained, than that a peculiar force exists by which organic substances are governed, by which they are arranged in certain specific modes, and are enabled to assist in sustaining the living system, and to create a chain of phenomena which as a whole are called *phenomena of life*. This vital force has been described as one quite peculiar, of which not the slightest trace is to be found in inorganic nature. Organic and inorganic nature are often indeed contrasted. We hear of the animate and inanimate forces of nature; we used to shrink from observing any connection between them; and, in particular, it was thought that the endeavour to explain many phenomena of life by means of the so-called dead forces might detract from the doctrine of life.

"In the true study of nature the principal aim ought to be, not only to make ourselves acquainted with the phenomena and laws, which distinguish and regulate living and dead matter, but also to arrange those phenomena and laws, and exhibit them in their several relations. The more our knowledge of these two departments is extended, and the nearer the several parts of the great science of nature are seen to approximate, the more firmly must we embrace the idea, as necessarily conformable to truth, that the same forces govern alike the animate and the inanimate kingdoms.

"Those who proceed on the assumption, that no such connection exists, will certainly not be able to trace it; but a search, conducted with impartiality, will be rewarded with the discovery of as much as may exist.

"In the natural sciences, the words *matter* and *force* are continually recurring. We endeavour, by an effort of imagination, to separate the one idea from the other. Yet we cannot conceive of matter without force, and scarcely of any force which does not react upon matter. We encounter many difficulties, while attempting to penetrate into the properties of matter. We are perplexed, first, with its being divisible either finitely or infinitely; secondly, with the great diversity of substances which exist; thirdly, with the great number of elementary bodies now known to chemists."

In the country of the modest Newton, we have been taught to believe that researches, however *impartially* conducted, may not be rewarded with the discovery of as much as may exist; nay, that the *ultimatum* of existing truths may never be reached by our finite faculties. We have always been accustomed to regard *inertia* as the characteristic of matter, and that all forces, and most manifestly the vital, were foreign to, and superinduced upon it. We think it an utterly unauthorized dogma, that the same forces govern the animate and the inanimate kingdoms.

Our author's style of general philosophical reasoning may be fairly appreciated from the section D, p. 78, entitled "*Transference of Vital Force*."

"The idea of transferring vital force is opposed to the idea of force. A slumbering force is awakened; a weak force is strengthened; but it is impossible to imagine the transference of a force from one material mass to another. We must first refer to this point in pausing to consider the manner in which we must conceive of the transition, into a new organic whole, of life originating in another. If animals impart vital forces to their offspring, then such forces must, no doubt, be lost by themselves. We do not perceive, however, that this takes place; on the contrary, they retain their strength, sometimes for many years, after having produced new beings, completely formed, of the same species. The tree which, for a great many years, produces fruit, and the seeds of which have, in great numbers, become full-grown trees around the parent stem, nevertheless lives as at first. A single poppy plant produces

thousands of small seeds, each of which grows up to a poppy plant equally perfect. Hence we are not entitled to admit the idea of transference of vital force, even where it is not opposed to the idea of force itself. With our own eyes we perceive the evolution of that force from its phenomena.

"What part, then, bears the germ of that vital force, which is afterwards to be developed? and at what point does the development commence? It is the poppy seed which bears the germ,—a small quantity of organic molecules, different in nature from all others,—some carbon, hydrogen, nitrogen, and oxygen, combined in a certain manner into substances, which are peculiar in respect of their composition and arrangement. The peculiar quality which distinguishes these substances from amorphous precipitates and crystals, they owe to their origin. Their elements were brought into a state of peculiar tendency, by the forces residing in the organic molecules of the plant, whose influence had previously governed them. They do not possess more than they exhibit, and they exhibit nothing but a change of their chemical composition. The seed changes its starch into gum and sugar, and so chemical forces forthwith appear, which seem to be intimately connected with the development of new forms. Another phenomenon soon succeeds, namely, the absorption of substances from without. These bring something with them: they are not merely *substances*, but the residence also of peculiar active forces to which they owe their composition. Of these forces, some portions combine with those which are derived from the seed itself. And now, the previously existing molecule, and that which is formed from external matter, both live;—the former through what it received from the parent-plant,—the latter through its having assumed the form of the other. This conformity arises from matter, and from the property which matter possesses, of obeying the action of forces, proceeding from the first molecule; in other words, the second molecule must necessarily be endowed with the capacity of becoming similar to the first, through the influence of the first. Thus, the second molecule did not receive its peculiarities, but

these were excited in it; and so this molecule also lives as well as the first, and in its turn can take up new substances from without, and entirely assimilate them. So again, the third lives also, and thus is life gradually extended. The molecules, after being once arranged in a certain manner, give birth to new arrangements, to new forces, as we endeavoured before to explain."—Twaddle.

In the second chapter on inorganic, organic, and organised bodies, plants, and animals, we find nothing definite and interesting; but in the third chapter, on the Atmosphere in its connection with organic nature, there are some curious enough lucubrations. After compiling from well known sources all the experiments upon the proportion of oxygen and carbonic acid gas to azote in the atmosphere, he comes to the following conclusion.

"It is not to be denied, that the quantity of carbonic acid must have become greater, and that of oxygen less, with the increase in the numbers of men, who respire, and make fires, and whose dead bodies putrefy;—but, on the other hand, a great many animals, on the increase of mankind, have been expelled from the earth's surface. By the fires, however, which man has kindled, the quantity of carbonic acid has undoubtedly been increased, and that of oxygen diminished; but it is difficult to decide with certainty whether that increase in the carbonic acid would have ever become perceptible, even though the very first human beings had been able to make eudiometrical experiments. It is, however, probable, that in any given bulk of atmospheric air, they would have found a little more oxygen, and somewhat less carbonic acid, than in the present day, provided the method of investigation had been sufficiently accurate.

"It is a consequence equally undeniable, that either the atmosphere will at last become infected by man, or that famine will arise on the earth. By the continual increase of man on the earth, the number of forests has been diminished. Man expels and destroys animals and plants, which previously lived undisturbed. It is principally by the large forests that the great quantity of carbonic acid, resulting from combustion and respiration, must be decomposed. There must necessarily be a

proportion between the number of plants and that of man and animals on the earth. The former must restore what the latter have taken from the atmosphere; the one must decompose what the other has imparted to the atmosphere. Wherever the equilibrium between the number of plants and animals is disturbed,—that is, when mankind increase and plants diminish,—then there will at last be no longer a sufficient quantity of carbonic acid decomposed, and the proportion between the oxygen and nitrogen, which we now assume to be invariable, will be altered.

"It is true that a large portion of the earth, susceptible of cultivation, still remains uninhabited by man. But if, in imagination, we transfer ourselves into futurity,—if we suppose the woods destroyed, the earth covered with edible plants which reach but to a small height in the atmosphere,—then we have in imagination reached a limit to the invariableness of the existing composition of the atmosphere, and at the same time to the existence of man upon our planet. The disappearance of the falls of Niagara and that of the human race belong to periods, which, it may be, are still far distant, but which, notwithstanding, will certainly arrive, if nothing meanwhile interpose.

"When will that period arrive? This is a question to which we may give an approximate answer. According to the experiments of Lavoisier and Davy, a man consumes 26·04 Paris cubic feet of oxygen in 24 hours; that is, 9,505 cubic feet a year. Let us suppose the number of men on the earth 1,000 millions, then these consume 9,505,000,000,000 cubic feet of oxygen every year, that is, nearly 8-10ths of a cubic geographical mile. The whole amount of oxygen, by which the earth is surrounded, is 1,953,570 cubic geographical miles. So that, if the number of mankind on the earth were always 1000 millions, they would require 2,451,000 years to take away all the oxygen from the atmosphere. If, from the present moment, plants were to cease decomposing carbonic acid, all the oxygen of the atmosphere would be exhausted after 2½ millions of years.

"By the operation of this cause, therefore, the human race will at some time be destroyed, if it should not happen to be so previously from other causes."

The fourth chapter treats of water in its connection with organic nature; the fifth, of the relation of the soil to organic nature. Here at last the author is at home, and becomes practically instructive. The remaining 53 pages of the book are interesting from the detail of valuable facts which they present, upon the varying composition of soils as derived from different geological rocky formations, and on the organic constituents of soils, such as crenic acid, apocrenic acid, geic acid, humic acid and humin, ulmic acid and ulmin; for the chemical properties of which seven bodies, we must refer to the book itself. The subsequent portion of the work will undoubtedly prove much preferable to the present; which abounds in vague and shadowy generalizations.

Human Magnetism; its Claims to Dispassionate Inquiry: being an attempt to show the Utility of its Application for the Relief of Human Suffering.
By W. NEWHAM, Esq. M.R.S.L.
London, 1845, pp. 432. Churchill.

WHILE we confess our utter inability to believe that animal magnetism is anything more than a creature of the fancy, we do not pretend to set bounds to the effects which may be thereby produced upon weak and credulous mortals. Imagination we are persuaded often exercises marvellous power in controlling disease, be it of body or mind. Hence the reputed efficacy under peculiar circumstances of metallic tractors, homœopathic globules, galvanic rings, and the like.

According to our author, "magnetism may be said to be the medicine of nature—to consist in the communication of the exuberant life of the healthy, to repair and sustain the deficient vitality of the sick,—and is *only* legitimately and justly used, when employed to restore that equilibrium of health, which has been restored by malady."—p. 17.

If this be its real definition, what an ample field for good is laid open in our workhouses. Let the pale, sickly, emaciated inmates be put without delay *en rapport* with a set of lusty yeomen, "whose limbs were made in England." The *vis vivida vite* thus imparted cannot but exercise a most salutary influence.

The author repudiates the idea of

magnetism being either supernatural or connected with satanic agency; laments the opposition of medical men to its doctrines; discusses the objections which have been arrayed against it, its applicability to the relief of medical and surgical diseases, and the requisite qualifications to practise. He concludes with the consideration of somnambulism, clairvoyance, prévision, phreno-magnetism, and extase. Some extracts from Miss Martineau's statements are inserted by way of appendix.

In the dedication, addressed to a reverend young friend, the author alludes to extracting "the sting from one page of suffering humanity." This rather posed us at the outset; for although we once read in some eastern tale of a book with poisoned leaves, we never before heard of a page with a sting. We are led to think the writer a well-meaning man, and only regret he should have allowed himself to plunge headlong into the depths of unauthorized and futile speculation.

MEDICAL GAZETTE.

Friday, March 14, 1845.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medice* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

THE IMPROPER ADMINISTRATION OF MEDICINES.

It is a somewhat startling fact, as set forth in the Sixth Annual Report of the Registrar-General, in the abstract of the causes of death by violence for 1840 (exclusive of ascertained suicides), and under the head of chemical injuries, that eight persons died from opium, twenty-one by other poisons, and no less than five by "medicines improperly given." Thus nearly fifteen in the hundred of individuals reckoned to be destroyed by poisoning fell victims to the improper administration of physic. This circumstance surely bespeaks the urgent necessity for putting a stop to the indiscriminate sale of

apothecaries' were now permitted. We earnestly hope, for the sake of the community at large, that Government will provide against this evil, either directly by legislative enactment, or indirectly through the medium of the Council of Health. In France, grocers, druggists, and apothecaries, come within the jurisdiction of the *Conseil de Salubrité*—a sanitary body in connexion with the police, and over which that important functionary, the prefect, always presides. His assessors are twelve titular members, six adjunct, and an indeterminate number of honorary members. The dean of faculty in the School of Medicine, together with the professors of public hygiene, and of medical jurisprudence, are members in right of office. This council is called upon to decide all questions respecting the health of the public, including the proper measures to be enforced on the outbreak of epidemic, epizootic, and contagious diseases; the due observance of the laws regarding burials; the prevention of nuisance, and of the sale of spoiled, debased, or noxious drugs.

It is to the last point we crave special attention, namely, that France, with a well organized school of pharmacy, deems it expedient to place all practitioners of that art under the vigilant supervision of the Council of Health. We can perceive no valid reason why the procedure of a country so justly pre-eminent in matters of science should not be adopted here.

A most flagrant instance of the fatal effects of nefarious physicking was divulged on a recent trial at the Cumberland Assizes. A man was indicted for causing the death of another, by administering to him three grains of corrosive sublimate and thirty grains of jalap. It came out in evidence that the prisoner, who went by the name of the "old soldier," was in the habit of dealing in medicines. To the unfortun-

nate deceased he gave two brown powders, into each of which he had been seen to put, with the point of a pair of scissors, certain tiny white lumps from a packet contained in a spectacle case; two small pieces into one powder, and one large one into the other. The largest was about half the size of a wheat corn; the others about that of a pin's head. A druggist's apprentice deposed to having sold the prisoner a pennyworth of jalap, which might have been two scruples; he did not weigh it—some drugs are thus disposed of—this he "sold at a guess."

Soon after swallowing one of the doses, the poor fellow was seized with vomiting, great difficulty of breathing, pain and burning from his throat to the stomach, under which symptoms he shortly died. On cadaveric inspection, the lining membrane of the stomach was found in a state of gangrene; the presence of corrosive sublimate was distinctly ascertained in that viscus.

The prisoner applied to a professional man, about a quarter of a year previously, for sixpenceworth of sublimate, but was refused. To a labouring man he had sold a recipe for a shilling, directing him at the same time to take about half a wheat-corn of "*crow's supplement*." He was found guilty, with a recommendation to mercy, and sentenced to be imprisoned during four calendar months, with hard labour.

It was not stated where he obtained the deleterious ingredient; but one thing is clear, that articles of that sort are much too readily procured in this country. Chemists, moreover, are blameworthy who allow their apprentices to dole out physic by guess.

Now we ask, even granting the force of the Roman adage, *agrotus debet sibi imputare cur talem elegerit*, are the public to be left at the mercy of such ruthless miscreants? At present there

is nothing to prevent this, or to check their unhallowed traffic. If a man chooses to take the title or addition of "old soldier," and to doctor people, he will be able to do so with impunity. He will infringe no law. The act does not come within the purview of the well-drawn restrictive clause of the new bill. It is only when convicted of manslaughter, in a court of assize, that he is liable to punishment. We would therefore suggest the following remedy. Let it be made illegal for any individual to deal in medicines for gain who is not duly qualified. Let, as we have repeatedly inculcated, every practitioner in pharmacy be examined, licensed, and registered by a board authorized by the Council of Health, and let him be strictly confined to the duties of his calling—the preparing, compounding, and dispensing of drugs. Were such means adopted, we do not hesitate to say there would be far fewer instances of death on record from medicines improperly given. It is not our object to impugn the chemists, many of whom we know to be possessed of skill and intelligence, but to remonstrate against the ill-regulated condition of the practice of pharmacy in Great Britain, and the facilities offered to base and unprincipled persons for obtaining the most baneful drugs. The chemists, indeed, are well aware of the risk of danger from the latter circumstance, and certain of their number in Lancashire have printed and circulated some very judicious resolutions, which ought, in our opinion, to be generally enforced. They are as follows:—

"That no druggist shall sell any poison without putting upon it a printed label, viz. 'Caution: the contents of this is Poison;' also the address of the party selling must be upon the label.

"That no poison shall be sold to young children.

"That each druggist shall keep a book for the purpose of *registering* the

sale of arsenic and other deadly poisons. This book to have ruled columns, properly headed (in print), stating the kind of poison sold, the date of such sale, the purpose, or specified purpose, for which it was sold, the signature of the party selling, and, lastly, *the address and signature of the party buying the poison.*"

NEW CHARTER OF THE COLLEGE OF PHYSICIANS.

(From the *British and Foreign Medical Review* for April 1845.)

To the Editor of the *Medical Gazette*.

SIR,

THE accompanying paper cannot appear in its proper place before the 1st of April; may I hope that the importance of its subject will obtain for it the advantage of earlier publicity in the pages of your journal?—I am, sir,

Your obedient servant,

JOHN FORBES.

March 12, 1845.

A Bill for enabling Her Majesty to grant New Charters to certain Colleges of Physicians and Surgeons. Ordered to be printed 25th February, 1845.

THIS Bill enables Her Majesty to grant new charters to the Colleges of Physicians of London, Edinburgh, and Dublin, and to the College of Surgeons of Edinburgh. It gives no information as to the character of the charters to be granted; and as none of these have been as yet laid before parliament, the profession generally must, for a time, remain ignorant of their respective provisions. The only one of the intended charters, of the contents of which we possess any knowledge, is that of the College of Physicians of London; and it is with great concern—we may indeed say, as a member of that body—it is with no slight feeling of shame that we announce to our brethren beyond the pale of the college that it contains one most important clause, which, in our humble opinion, not only vitiates all that is good in it (and it contains much that is good), but stamps it, as a charter, in the highest degree as illiberal and unjust, alike unsuited to the spirit of the present time, and unworthy of the institution whence it emanates. The provision to which we refer is *the limitation of the fellowship to a small number of the members of the corporation*. At the moment

* *Pharmaceutical Journal and Transactions* for March 1845, p. 416.

we are writing, it is not finally decided whether the number of FELLOWS shall be definitely limited to *two hundred*, or shall bear a fixed proportion to the varying number of Licentiates or Associates. But, in either case, the result will be the same, viz. that *only a small proportion of the MEMBERS* (one-fourth, one-fifth, or one-sixth) *can by possibility become FELLOWS*, that is to say, *can obtain any corporate privileges, or attain any of the offices or honours of the College.* When it is considered that by the new charter the College is reconstituted as a CORPORATION—that its title is changed to that of the ROYAL COLLEGE OF PHYSICIANS IN ENGLAND—that by the new Bill every future English physician is *compelled* to join the corporation as a *member*, and to pay a fee on joining it; and yet that the obtaining of any corporate privileges, or attaining any corporate honours, can only, by possibility, fall to the lot of a small minority—it can hardly be imagined that such a constitution could have been framed at the present day by the members of a scientific body, or, if framed, that it could obtain the sanction of the government. That it has been framed, however, is certain; but we are far from believing that it will obtain the sanction of government without modification.

The charter recently granted to the COLLEGE OF SURGEONS, and which has excited so much discontent in that branch of the profession, is greatly more liberal and just than the one under consideration; inasmuch as, by the Surgeons' charter, *every member may become a FELLOW*, and thus attain all corporate rights and privileges, on submitting to certain conditions therein laid down. It remains to be seen in what light the Physicians will regard the charter about to be granted to their College; but if, on being made aware of its character, they sit down in quiet and silent contempt, we shall, to say no more, be surprised. The College, however, in such a case, may be justified in considering its proceedings as sanctioned by those most affected by them; and, though we will not the less maintain the justness of our own views, we will at once admit that we have been mistaken as to the opinions and feelings of the physicians of England.

Instead of stating, as we have done, that the future Members or Associates of the College of Physicians possess by the charter *no corporate rights or privileges*, we ought to have stated that *one privilege is conceded*, which the College may possibly regard as of some value: as, however, we consider it the reverse of valuable, we have rejected it from our category of corporate rights. The privilege is this:—The members are permitted, on one day in the year, to meet the Fellows in the College, and to vote, *in con-*

junction with them, in the election of Fellows (four or five, perhaps) to fill up the few vacancies occasioned by death! For ourselves, we confess that we hope never to see a spectacle so melancholy—to use no harsher term—as that of a body of gentlemen thus consenting to compromise at once their dignity and their rights, by sanctioning an act of injustice towards the whole body of which they are members, and thus assisting in their own degradation.

In making these observations, we consider ourselves as discharging an imperative duty towards the College of Physicians. Considering the provision of the charter here animadverted on as calculated to be still more injurious to the College than to the profession, we feel that we should not be fulfilling the solemn obligation we came under on becoming one of its members, if we failed to advocate any measures which we deem calculated to promote its best interests. The voice of the profession, if it chooses to speak, may be listened to, though our words may have been unheeded; while its silence, if it remains silent, will at least save the College from the annoyance of any more fruitless discussions within its own walls.

IMPORTANCE OF CHEMISTRY.

FOR the proper study of the functions performed both by plants and animals, a knowledge of chemistry is essential, and it has therefore long formed one of the objects of professional study. Without it we should be ignorant of the intimate nature of the products of animals, either in health or in disease, and be unable to understand the phenomena of several of the functions of the body, or the changes which take place in them in disease. We require a knowledge of chemistry for the preparation of drugs; also for understanding the principles which require to be attended to, in their prescription and administration. Animal chemistry, also, by informing us accurately of the changes which take place in many of the secretions in disease, will no doubt lead to great improvements in practice."—*Medical Education; being a Lecture delivered at King's College by J. Forbes Royle, M.D.*

FACULTY OF GLASGOW.

To the Editor of the Medical Gazette.

SIR,

HAVING been for many years a member of the Faculty of Glasgow, I read with much interest your remarks on the summary proposal to ~~extinguish~~ this ancient Corporation.

Truly, the change between the present bill and its predecessor argues a despotic tendency which one does not expect to witness now-a-days on the part of our lawgivers. Sir James Graham is very accommodating in certain quarters. The English corporations are to be thoroughly respected—the universities won't permit their privileges to be tampered with in the slightest degree. The vested rights of the Apothecaries' Company are to be maintained, although not of thirty years' standing, whilst the corporation of Glasgow, founded by Royal Charter more than two centuries ago, must be swept out of the way, because it has been found inconvenient to certain other institutions! I trust, however, that the ruling powers of the Faculty will bestir themselves, and look after the interests of themselves and the members at large. Sir James appears to lend an open ear to every body, and the last advisers are ever the most welcome.

Seriously, I would ask, Mr. Editor, what will be the position of members of this corporation if this iniquitous proposal be carried? Being no longer members of any collegiate body, are they to be cast out of the ranks of the profession? What necessity exists for such a change as the threatened one, I cannot conceive, but if some alteration be essential, then I would suggest that the Edinburgh and Glasgow Colleges be united under the title of the Royal College of Surgeons of Scotland, each having its due share of power and influence in the new incorporation. Some such arrangement as this is (at least) due to the Glasgow College, and is more especially due to its present members, who have taken out its diploma on the faith of the stability of its chartered rights.

Thanking you, Mr. Editor, for your able advocacy of the rights of this ancient body, I subscribe myself, sir,

Your very obedient servant,

A MEMBER OF THE FACULTY.

March 8, 1845.

THERMOMETRICAL REGISTERS.

To the Editor of the Medical Gazette.

SIR,

I AM induced to trespass on your attention in consequence of two communications inserted in the GAZETTE of the 7th ult. and the 8th inst., the utility of which, to the generality of your readers, I am at a loss to discover. It would be unreasonable to expect that medical men in general should keep a meteorological register so scientific as the one kept at Greenwich Observatory; still we might hope for something more

practically useful than those forwarded you by your correspondent C. from Torquay.

A register of observations made at 9 A.M. and 9 P.M. as regards the barometrical, thermometrical, and hygrometrical state of the atmosphere, with the general direction of the wind, and character of the day, would, in my opinion, be extremely desirable, as affording the means of tracing something like cause and effect between the climate and the diseases which prevail at various periods, and hence enabling us with more confidence to suggest means of prevention, and, as far as it may indicate the probable nature of disease, a more beneficial mode of treatment. But, at the least, such reports, drawn up from observations made on the same plan, and with instruments similarly placed, would be sufficient to enable the profession to arrive at a tolerable estimate of the relative climate of the different localities where such registers might be kept, and thus afford them the opportunity, in cases where change of residence is desirable, of selecting a situation with rather more certainty of its being beneficial, than has hitherto been the case. Of course, the geological character, aspect, and bearings, of each place, should be described at the outset.

I am aware that, in the quarterly reports of the Registrar-General, some meteorological reports are published, and my object in addressing you is to endeavour to excite the members of the profession generally to take up the subject, and that your correspondent at Torquay may be induced to extend his observations, and make them more worthy the pages of your valuable journal.

I am, sir,

Your obedient servant,

AN OBLIGED AND CONSTANT READER.
Dover, March 10, 1845.

OPIUM A HAZARDOUS REMEDY IN STRANGULATED HERNIA.

THE following cases were related to the New York Medical and Surgical Society, with a view to shew the danger of using opium or its preparations when strangulation of a hernia is suspected; the symptoms of strangulation being masked by the medicine, and the operation consequently being deferred until too late to be successful.

Dr. Buck stated that he was called to operate on a lady aged 60, whose hernia (femoral) had been strangulated two days. She had been put under the influence of tobacco and an anodyne injection, administered on the first day she was taken ill, which was Sunday. On Monday she was found in a state of profound narcotism. On Tuesday Dr. Buck was called in. The patient then

lay in a stupor, and did not appear to suffer. The hernial tumor was large, and its contents were omentum and intestine. The operation was performed the same day, and death ensued thirty-six hours thereafter. On examination, the strangulated portion of intestine was found of a purplish brown colour.

Dr. Watson reported as follows :—a lady, aged 64, a rather small and spare woman, about six weeks before the present attack, was seized with severe and sudden pain in the bowels, which was considered bilious colic. She was treated with very large and repeated doses of opium, which for the time overcame the pain. On Tuesday, May 28th, while busying herself about her household duties, she was again taken as before, and the former treatment resorted to. The amount of opium was very great, some ten or twelve grains per diem for several successive days. The pain was effectually overcome, and the only evidence of a narcotism produced was a pleasant hallucination without sleep, and a tingling or itching sensation over the whole body. She continued under treatment in this way up to the evening of May 31st; and as a small swelling had recently been detected in the right groin, and her bowels had not been opened for nearly three days and a half, a consultation was requested. Dr. W. now saw her for the first time, about nine or ten o'clock at night, and recommended the operation. Some hesitancy existing, Dr. Mott also met the other attendants in consultation at midnight. The operation was resolved upon, and was performed by Dr. Watson. The hernia was femoral; no fluid existed in the sac.

The protrusion was small, and the parts united by adventitious adhesions, the result of inflammation, probably existing there since her first attack, some six weeks before. On the next day the narcotic condition still existed; bowels still constipated, notwithstanding the use of oil and enemata. On June 2d, the bowels were freely and spontaneously moved for the first time. After this, all evidence of narcotism subsided, and the case began to promise well. The wound was dressed on the sixth day, and it was then dry, and appeared to have united by the first intention; but in a day or two afterwards it opened, and gave issue to a very offensive discharge, which excoeriated the surrounding parts. The whole of the pubic region and the right groin became inflamed, and the discharge for several days appeared to increase in quantity, and become more offensive. On the 8th June, a large slough was found lying under the integuments in the bottom of the wound, which was removed. Portions of feces appeared on the dressings. The wound gradually contracted,

and she continued under treatment until July 15th, when a truss was applied.

Another instance was mentioned by Dr. Watson. The husband of a female aged 60 objected to the performance of the operation on his wife, and in consequence it was deferred from hour to hour. Sixty drops of laudanum were given to allay irritation, and a consultation called. Croton oil was prescribed to relieve the bowels. At the next meeting the patient was so comfortable and free from pain, that the operation was deferred until the next morning, when she was found moribund, being twenty-four hours from the occurrence of the strangulation.—*N. Y. Journ. of Med.*; and *Amer. Journ. of the Med. Sciences.*

EXTRAORDINARY EFFECTS OF A STROKE OF LIGHTNING.

By JOHN LE CONTE, M. D.

FIVE negroes were simultaneously prostrated by a single stroke of lightning on a plantation in Georgia. The sun was shining brilliantly at the time, and a greater portion of the visible hemisphere presented the usual serenity of the summer sky. A singular and rather angry-looking cloud had, for a short time previously, been observed near the verge of the south-eastern horizon, from which occasionally proceeded the low rumblings of very distant thunder. Suddenly the whole atmosphere was illumined by a flash, succeeded by a single report, and the cloud quickly dispersed, precipitating a little rain. The five negroes were all taken up in a state of apparent death.

"CASE I.—A negro girl, Adeline, aged about thirteen years, was up in the branches of a small mulberry-tree, twenty feet high, and standing sixteen feet in front of a line of negro houses, which extended parallel to a wood situated one hundred yards in the rear of the same. She was engaged in throwing down the fruit for her little companion below. Every principle of life seems to have been instantly extinguished by the intensity of the electrical shock :—her body had to be taken down from the branches of the tree where it had lodged. No marks of external injury observed.

"CASE II.—Another female child, Kitty, aged about six years, was standing immediately under the tree. She was instantaneously killed. No superficial marks of injury observed.

"CASE III.—Chloe, an adult woman, aged forty years, was walking about ten feet more remote from the base of the tree than the latter child; and, also, about five feet more distant than the two who survived the

shock, viz. than Cases IV. and V. She was instantly killed. No marks of injury recognised, excepting a burnt spot, the size of a dollar, under the right axilla. Her clothes were set on fire; but this was probably occasioned by the breaking of a tobacco pipe which she was smoking at the time, and which scattered the ignited contents over her cotton garments. In the three cases above mentioned all the ordinary attainable means of resuscitation were tried without success.

"CASE IV.—Charlotte, an adult woman, aged twenty-nine years, was standing halfway between Cases II. and III., and, consequently, about five feet from the root of the tree. After remaining in a state of insensibility for some time, she gradually recovered her consciousness. A dose of castor-oil was then administered. The skin on her right shoulder was abraded for a space as large as a dollar. Her clothes were rent into shreds; on the right side of her body, the skin was blistered, and marked with discoloured streaks, which extended anteriorly on the lower portion of the abdomen towards the pubes. A small streak likewise extended along the interior aspect of the right arm. She complained of pain in the stomach and bowels for three weeks. No vomiting or burning in the hands and feet, as was experienced in the next case. She has been married several years, but has never been pregnant. Her menstruation was perfectly regular prior to the reception of the shock, but has since that time been very irregular; sometimes having two periods per month, and then escaping two months. The flow has also been much diminished in quantity. Her health has not been very good since she was struck; manifestly resulting from her menstrual irregularity. A recent copious bleeding has afforded her evident and immediate relief. Her reproductive functions appear to continue dormant.

"CASE V.—Sarah, a woman aged at least seventy years, was standing immediately beside the last. She, likewise, gradually recovered her consciousness. No medicine was administered. Her clothes were rent; and after a few days, marks of discolouration were manifested along the right arm and right side of the trunk. A violent paroxysm of vomiting followed the restoration to a state of sensibility; which continued, with occasional interruptions, for ten or twelve hours. As in the preceding case, she complained very much of pain in the region of the stomach and bowels, for at least two weeks after the accident. A troublesome sensation of burning was experienced in the palms of her hands and the soles of her feet; and in the course of two or three weeks a swelling made its appearance under

right foot, which ultimately resulted in the exfoliation of a portion of the thick, indurated epidermis of that part, about one and a half inches in diameter.

"The catamenial discharge, which had, in accordance with the ordinary arrangement of nature, ceased for more than twenty years, was completely and, thus far, permanently re-established! At least, a discharge from the genital organs, having all the obvious and sensible physical characters of the catamenia, and observing, with rigorous exactitude, its peculiar law of periodicity, has been established, and continues to recur, with the utmost regularity, up to the present time (Aug. 1844), after the lapse of more than a year! She has not missed a single menstrual period since she was struck by lightning. To use a liberal paraphrase of her own language, her "Moons return as regularly as when she was a young woman." The flow comes on with the usual premonitory symptoms. Her mamæ have undergone an obvious preternatural enlargement, apparently originating in a sympathetic irritation, emanating from the establishment of the reproductive functions. This woman has had but one child, to which she gave birth soon after reaching womanhood. The catamenial flux is represented to have been regular up to the period of its natural cessation, between forty-five and fifty years of age; subsequent to which epoch she has presented all the appearances ordinarily attending the gradual approach of the state of senility in a vigorous constitution. The electrical shock, likewise, completely relieved her of a troublesome strangury which had harassed her for four or five years. Very recently she has, occasionally, had a very slight recurrence of the same complaint, although under a much milder form. Otherwise, her health continues perfectly good; there being, so far as symptoms show, not the slightest indication of the supervention of organic disease of the uterus."—*New York Journ. of Med.*; and *Amer. Journ. of the Med. Sciences*.

CURIOUS MALFORMATION CONNECTED WITH CONGENITAL IMPERFORATE ANUS.

A FEMALE child, two days old, was brought to the Hôpital Saint-Louis to be operated on by M. Boyer, for an imperforate anus. There was no external sign of an orifice in the region of the anus; the abdomen was tympanitic and painful. M. Boyer made a small incision in front of the coccyx, and examined carefully, with the end of the finger, the bottom of the wound. Finding a fluctuating tumor, he, without hesitation, inserted into it a trocar, when the escape

of stercoraceous matter in a liquid state led to the supposition that the instrument had penetrated into the intestine; the abdomen decreased in size, and for a short time everything progressed favourably. Peritonitis, however, ensued, and the child died.

Necropsy revealed the following condition of things:—The rectum terminated in a pointed *cul-de-sac*, immediately behind the bladder, and it seemed as though it had been tied with a ligature; it contained hardened fecal matter, and its cavity communicated by two very small openings, the one with the bladder, and the other with two distinct sacciform bodies, placed on each side of the bladder. These two sacs were about the size and shape of the thumb of an adult; each one was found, on a close examination, to consist of a uterus and vagina; and these two uteri and vaginae, situated on each side of the bladder, received, as through a conical filter, the liquid portions of the matter contained in the intestine. It was into one of them that the *trois quarts* was found to have penetrated.—*New York Journ. of Med.*

RECEIVED FOR REVIEW.

Sixth Annual Report of the Registrar-General of Births, Deaths, and Marriages in England. London, 1844.

Essay upon Cretinism and Goitre. By E. Wells, M.D. London, 1845. 8vo. pp. 69.
Medicina Gymnastica. By C. Ehrenhoff. London. 8vo. pp. 18.

Remedial Influence of Oxygen or Vital Air, &c. By J. E. Riadore, M.D. &c. London. 8vo. pp. 177. 1845.

Medical Education: a Lecture delivered at King's College, London. By J. F. Royle, M.D. &c. 12mo. pp. 63. 1845.

On the Relative Liability of the Two Sexes to Insanity. By J. Thurnam, M.D. (From the Quarterly Journal of the Statistical Society, for Dec. 1844).

The Application of Prismatic Reflection to the Investigation of Disease; and Observations on Diseases of the Ear. By A. Warden, M.D. (from the Edinburgh New Philosophical Journal, and Monthly Journal of Medical Science).

Borough Inquests of Birmingham. Folio, pp. 6.

APOTHECARIES' HALL.

Gentlemen who have obtained Certificates, March 6.—W. H. Wright.—A. P. Hamilton, Poole, Dorset.—H. E. F. Shaw, Sutton, Coldfield.—W. S. Rootes, Ross, Herefordshire.—H. F. Carter, Plymouth, Devon.—G. Ashdown, Uppington, Shrewsbury.—E. C. Hulne, Totness, Devon.—J. Frain, South Shields.—O. F. Heritage.—R. C. Griffith, 10, Gower Street, London.—T. Underhill, Jun. Tipton, Staffordshire.—R. Bark, Liverpool.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

List of Gentlemen admitted Members, March 7.—H. B. Marsh.—W. Davies.—W. Ayre.—C. R. Hall.—J. Davis.—T. Bennett.—J. Daubeney.—W. Tredwen.—W. H. Clarkson.—C. Palmer.—T. Wise.—J. Colegrave.

MORTALITY OF THE METROPOLIS.

Deaths from all causes registered in the week ending Saturday, March 1.

ALL CAUSES 1133
SPECIFIED CAUSES 1132

I.—Zymotic (Epidemic, Endemic, and Contagious) Diseases, 169; among which, of—

Small Pox	24
Measles	24
Scarlatina	23
Hooping Cough	45
Croup	12
Thrush	3
Diarrhoea	8
Dysentery	2
Cholera	0
Influenza	1
Typhus	18

II.—Dropsy, Cancer, and other Diseases of uncertain or variable Seat, 119; among which, of—

Inflammation	3
Dropsy	38
Scrofula	1
Cancer	15
Atrophy	14
Debility	25
Sudden Deaths	12

III.—Diseases of the Brain, Spinal Marrow, Nerves, and Senses, 171; among which, of—

Hydrocephalus	33
Apoplexy	32
Paralysis	22
Convulsions	53
Insanity	1
Delirium Tremens	1

IV.—Diseases of the Lungs, and of the other Organs of Respiration, 404; among which, of

Pneumonia	111
Hydrothorax	7
Asthma	52
Phthisis or Consumption	158
Diseases of the Lungs, &c.	20

V.—Diseases of Heart and Blood-vessels 41

VI.—Diseases of the Stomach, Liver, and other Organs of Digestion, 79; among which, of—

Teething	16
Gastritis	2
Enteritis	14
Tabs	9
Hernia	3
Disease of Stomach, &c.	5
Disease of Liver, &c.	13

VII.—Diseases of the Kidneys, &c. 9

VIII.—Childbirth, Diseases of the Uterus, &c. 12; among which, of—

Childbirth	9
Disease of Uterus	3

IX.—Rheumatism, Diseases of the Bones, Joints, &c. 11

X.—Diseases of Skin, Cellular Tissue, &c. 2

XI.—Old Age. 88

XII.—Violence, Privation, Cold, and Intemperance. 27

WILSON & OGILVY, 57, Skinner Street, London.

THE LONDON MEDICAL GAZETTE,

BEING A
WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

FRIDAY, MARCH 21, 1845.

RECORD OF CASES.

By ALEXANDER URE,

Fellow of the Royal College of Surgeons of England; and Surgeon to the Westminster General Dispensary.

(For the Medical Gazette.)

Tubercular thickening of the Lip, successfully treated by Iodide of Potassium.

Mrs. H., aged 28, admitted the 16th Sept. 1844. The upper lip is greatly enlarged and prominent; its external surface is the seat of superficial ulcers, for the most part covered with crusts. The affection commenced six months previously as a hard round swelling in the right side of the lip, unattended with discoloration. The swelling subsequently extended over the whole lip, and is always most conspicuous in the morning. Several indurated tubercles can be felt imbedded throughout its substance. States that her general health is good. Her tongue is clean, but the pulse is rather frequent, and she complains of thirst.

Ordered a solution of Epsom Salt and Tartar Emetic twice a day; and to pencil over the excoriated surface every morning with a lotion containing ten grains of Nitrate of Silver dissolved in an ounce of pure water.

23d.—Sores are all healed, but the swelling remains as before.

To take five grains of Plummer's Pill, night and morning.

27th.—No change in the condition of the lip.

Ordered five grains of the Iodide of Potassium, dissolved in water, twice daily.

Oct. 4.—The swelling is considerably diminished; the tubercles much lessened in size.

To continue the Iodide of Potassium.

903.—xxxv.

8th.—Tumefaction quite gone; no tubercles to be felt.

The above case exemplifies, in a striking manner, the power of iodide of potassium in promoting the absorption of a variety of tubercular deposition, which seemed to bear some resemblance to elephantiasis in its primal stage.

Periosteal thickening, yielding to the use of Iodide of Potassium.

Mrs. G., aged 28, admitted 11th Sept. 1844. Occupying middle third of left ulna is a prominent swelling, extending over a space of two inches. There is a slight tenderness on pressure. The superimposed skin presents a faint reddish blush. Occasional throbbing pain is experienced in the part affected, shooting down to ring and little finger in the course of the ulnar nerve.

The pain is so bad at night as to prevent sleep. The affection commenced about two months previously, shortly after her last confinement. Her general health is indifferent, and she complains of debility. Has been under the care of a medical practitioner, and applied blisters and plasters, but without deriving any benefit.

Ordered six leeches to the part, to be followed by a lotion containing diacetate of lead.

Sept. 13.—Redness abated, but the pain persists.

To take two grains of iodide of potassium in an ounce of compound infusion of gentian twice daily, and one grain of opium at bed-time; bran poultices to be applied to the arm.

Sept. 27.—Has persevered steadily in the use of the above remedies; the swelling and pain of the arm have altogether subsided. Now suffers only from weakness. Under the employment of infusion of cascarrilla with ammonia she progressively improved, and ere long ceased to attend.

Diffuse cellular inflammation caused by a splinter of an iron hoop.

M. H., aged 49, a drayman, admitted Dec. 9, 1844. Five days prior to the above date, while lifting a cask, a splinter of rusty hoop was forced into left thumb. The thumb is swollen to twice the natural size; the integuments are hot, tense, and of a dusky red hue, as is also the case with the hand and wrist. He complains of constant throbbing pain, referred to the volar surface of the thumb. Has been in the habit of drinking freely of beer and spirits. Was leeches prior to my seeing him. I made a free incision through the soft parts down to the bone; prescribed for him every four hours a dose of the saline antimonial mixture formerly mentioned; and bran poultices to be applied every four hours; low diet.

Dec. 11.—The swelling, tension, and redness of the hand and wrist, rather increased. The opening, from whence some ichorous matter issues, was enlarged in the direction of the apex of the thumb. Several punctures with a lancet were made into the tense skin over the back of the hand and thumb. Tongue much furred.

To continue the poultices, emeto-cathartic mixture, and to take directly five grains of calomel.

Dec. 13.—Tension and redness much lessened: a piece of iron hoop came away yesterday. There is now some boggy swelling of the hand, extending beyond the wrist a little way up the forearm. The wound in the thumb discharges freely. Expresses himself as feeling much more comfortable, though the fingers are hotter than usual.

The same treatment to be continued.

Dec. 16.—Swelling much abated; the hand begins to assume its natural aspect.

Dec. 18.—Progressive improvement in all respects. Wound in thumb is granulating, discharge less.

Dec. 23.—Granulations now on a level with the surface; still some doughy swelling at wrist, and dusky redness; is acquiring some command of the fingers, heretofore stiff and motionless. The thumb was dressed with strips of adhesive plaster, a roller applied over the hand and forearm, and kept moist with an evaporating lotion. As his bowels were rather confined, he was ordered—

To take five grains of blue pill, with as much compound extract of colocynth, every other night.

This patient went on favourably up to the 11th of Jan. 1845, when there was a fresh accession of tense swelling at the upper and fore part of the thumb, into which I made a free incision with a bistoury. This bled copiously, and gave immediate relief.

Jan. 13.—Two splinters of rusty iron came out of the wound this morning. After this occurrence it slowly healed, and recovered its natural appearance by the 7th of February. A fortnight afterwards he resumed his work.

The above case illustrates the fact that habitual excess in the use of fermented liquors renders persons liable to inflammatory attacks of a severe kind and of a specific character from apparently trifling causes. Here the subject was a brewer's servant, in whom the accidental introduction of a scale of iron rust induced a diffuse and extensive cellular inflammation. The splinter, which entered by an opening in the lower part of the thumb, must have been subsequently broken by the muscular movement, for it came away piecemeal. It is curious that two of the fragments should have quietly worked their way to near the apex, and been eventually evacuated through an artificial aperture in that situation. Had an incision been made from one end of the thumb to the other, in the first instance, it is possible the whole extraneous substance might have been more readily removed; but the account given by the man touching the probable size of the splinter did not seem to warrant such practice.

Erectile tumor of the eyelid, treated by inoculation with croton oil.

Mary D., aged 3½ months, admitted Dec. 30, 1844. At the inner angle of right upper eyelid is an erectile tumor nearly as big as a currant. It appeared like a scratch at the period of birth, and has progressively reached its present size. It has, however, been growing more rapidly during the by-gone month. There is a reddened villous condition of the palpebral conjunctiva subjacent to the tumor. The child is in other respects very healthy. I first of all tried the plan of subcutaneous puncture, employing for this purpose a common iris knife. A repetition of the procedure after the lapse of weeks appeared to have no effect in reducing its volume. Towards the middle of February I had recourse to inoculation with croton oil. I accordingly made several minute punctures with a cataract needle, besmeared with the oil over the surface of the nævus. This gave rise to redness and swelling, which lasted a few hours, and subsequently to small points of suppuration. This tiny operation was repeated at an interval of a week. The result has proved a rapid diminution, with withering, of the tumor; and now scarcely a vestige remains, with the exception of a slightly puckered speck at the corner of the eyelid.

In a case like the above the employment of the knife would have been inadmissible, not only on account of serious hæmorrhage, but because the cicatrization of the wound

might lead to eversion, or shortening of the lid. The use of the seton, escharotics, or vaccination, would have been equally contraindicated, owing to the risk of violent irritation, or of sloughing. The sole object was to create inflammation enough in the parenchyma of the nœvus, and which might be perfectly under control. For the plan of treatment by inoculation with croton oil, the profession is indebted to M. Lafargue, a French surgeon. Not more than five or six punctures ought to be made at one time. A common lancet may be used for the purpose, just as in vaccinating.

Ulcerated pile, treated with chromic acid.

J. L., aged 31, tailor, admitted April 27, 1844. At verge of anus is a dark hemorrhoidal tumor, the bigness of half a walnut, of which the surface is ulcerated and extremely painful. The tumor had been extruded several days, and various attempts at reduction proved of no avail. The patient seemed in a most deplorable state, haggard, and worn out by suffering, from which he could only obtain a brief respite by observing a half-bent posture. He had been subject to piles for some years. The bowels were open. I applied the chromic acid freely over the whole of the diseased surface.

April 29th.—Says that he felt considerable uneasiness in the part during the whole afternoon following the application. He is now quite comfortable in all respects. A considerable slough has been detached, and the excrescence is withered and shrunk to the bulk of a raisin. Bowels confined.

Half an ounce of castor oil.

May 1.—Complains of a feeling of aching referred to the sacral region; bowels torpid; inappetence for food; sense of languor and listlessness.

To take an ounce of compound infusion of gentian, with a drachm of Epsom salt, every morning.

May 13.—Perfectly cured. The trifling remains of the pile are wholly insensible, and create no inconvenience whatever; his bowels act naturally.

Chromic acid is, as every chemist knows, a most powerful oxidizing agent, yielding half its oxygen readily to organic substances, and being reduced to sesquioxide. On this principle, I was led to employ it as an escharotic. It is exceedingly convenient for application, inasmuch as it consists of a thick crystalline pap, which, when rightly managed, does not spread beyond the prescribed limits; and so soon as its erosive operation is finished, passes into the state of inert pulverulent sesquioxide, above mentioned.

My colleague Dr. Child, of Mortimer Street, requested me on the 30th of May,

1844, to see Mrs. W., aged 30. For a month previously she had been suffering much from two hemorrhoids situate upon the right side of the verge of the anus, each about the size of a kidney bean, and was anxious to obtain alleviation. Various external and internal means had been already employed, but in vain. She had been troubled with piles at different times during the preceding eight years. Her general health is tolerably good, and the bowels usually regular. Since her last confinement, ten weeks ago, she has complained of shooting darting pain referred to the anus. It was determined to apply chromic acid, which was accordingly done. It was found necessary to repeat the application on the 1st of June. This caused acute burning pain both times, destruction to a considerable amount of the diseased texture, consolidation of the remainder, and permanent relief from the distressing ailment.

Gout treated by belladonna and naphtha.

J. P., a German courier, aged 45, admitted Nov. 13, 1844. Of spare habit and sallow complexion; his habits of living are moderate and regular; of late rather sedentary. Complains of racking pain in ball of great toe of left foot, which is red and swollen. The pain is worst about four o'clock in the afternoon, and abates towards bed-time. It came on suddenly, as if from a wrench, on the morning of the 10th curr. Pulse 96, weak; occasional chills; tongue a little coated at the base; urine natural; sleeps ill. He had a precisely similar attack three years ago, which lasted a fortnight.

To apply, with gentle friction over affected surface, an ointment composed of one part of extract of belladonna, and eight of cerate, and to take five grains of blue pill, with five of extract of colocyath, at bed-time.

Nov. 15.—The pain is dulled, but the toe is still swollen, and dusky red; bowels are open.

To use mineral naphtha as an embrocation.

22d.—Derived direct benefit from pencilling over the part with naphtha; the pain, redness, and swelling, are now wholly removed. Feels quite recovered.

This case is adduced in order to show the topical efficacy of rectified coal naphtha in the subacute form of gouty inflammation, as pointed out in a paper I published in the *MEDICAL GAZETTE* for last year. The patient was a German courier, who had been more or less accustomed to fare well, both as regards eating and drinking. His recent sedentary manner of living would certainly tend to rouse into activity any gouty disposition lurking in the system. The pain was assuaged in the first instance

by the belladonna salve, but no decided melioration ensued until recourse was had to the naphtha.

Circumscribed tumor of the breast.

M. W., aged 27, cook, unmarried, admitted under me Oct. 10, 1844. In April last, she perceived for the first time a circumscribed swelling, the bigness of a hazelnut, at the lower inner portion of the right mamma. It has gradually been shifting its position upwards, and is now imbedded in the upper and sternal part of the breast. It is of the size above mentioned, not having increased sensibly since first noticed. It is hard, irregular, freely moveable, quite unconnected to all appearance with the mammary gland. There is no drawing in of the nipple.

The tumor is unattended with pain. She ascribes its origin to pressure of the stay-bone. Her general health is good, and catamenia regular. Has three brothers living who enjoy good health, her father died of consumption.

To guard against local pressure.

Dec. 29th.—Has experienced neither pain nor inconvenience since last report. Health continues good. The tumor remains unchanged.

This seems to be one of the lobular tumors of the breast, described by Sir Benjamin Brodie, and which are not of a malignant nature. Cases have come within my cognizance in which they have persisted during thirty years, without any material alteration. It is curious, that pressure, which has from time to time been recommended as a means of cure for various morbid growths, even including cancer, should have been here the "*fons et origo mali*." Pressure, indeed, may occasionally promote the absorption of oedematous fluid and adipous texture, which surround a scirrhous mass, but cannot disperse truly carcinomatous structure itself.

Incontinence of urine caused by the use of bicarbonate of soda.

Mr. H., aged 68, came from Buckinghamshire to consult me on account of the following symptoms.

May 25th, 1844.—For the last six months has laboured under incapacity of retaining his urine, which comes away at frequent intervals and in very small quantity. Each emission is accompanied with pain along the course of the urethra, but nowhere else. The bowels are apt to be moved simultaneously with the flow of urine. His general health is good, as also his appetite. The bowels act without the aid of physic. Would sleep well were it not for the frequent calls to micturition. The prostate gland is

of the natural size, and there is no trace of calculus within the bladder.

The urine affords an alkaline reaction with red litmus paper immediately when voided, and evolves at the same time a faint ammoniacal odour. Its specific gravity is 1.010. It is deficient in uric acid and in phosphate of lime; deposits, after being allowed to stand a few hours, ropy mucus and crystals of ammoniaco-magnesian phosphate. A few pus corpuscles are visible on microscopic examination. The urine becomes turbid upon exposure to heat.

He ascribes his infirmity to the use of bicarbonate of soda, of which he formerly swallowed half an ounce every week to relieve indigestion. Has latterly derived much benefit from a mixture of liquor potassæ and spirit of nitric ether, but has not taken any during the last eight days.

I prescribed 4 grains of benzoic acid, made into a pill, with balsam of tolu, to be taken thrice, and a couple of capivi capsules twice a day.

This gentleman visited me again upon the 22d of June, improved materially in all respects. He is able to hold his water a couple of hours; it does not dribble away as formerly while at stool, nor is he obliged to get up oftener than twice in the night. He no longer experiences the pain in the urethra.

The urine is now limpid, acid, remaining so after standing forty hours. Its specific gravity is 1.016. It is scarcely affected by heat.

At his own request the same remedies were continued, and with sustained benefit.

Nothing could be more satisfactory than the effect of the benzoic acid and capivi in correcting the above unhealthy state of urine. The uneasiness formerly experienced during its discharge was unquestionably due to its alkaline quality; for in this condition it always irritates the mucous membrane of the urinary passages with which it comes in contact.

The preceding case is brought forward chiefly with the view of putting dyspeptics on their guard touching the injurious consequences which may arise from the indiscriminate and prolonged use of bicarbonate of soda. A nearly parallel instance is recorded in a paper of mine relating to calculous concretions, published in Vol. I. of the Pharmaceutical Journal and Transactions. An intelligent chemist, in the vicinity of London, after using the aforesaid preparation for eighteen months to relieve acidity of stomach and heartburn, was seized with inability to retain his urine, accompanied with the discharge of white concrete matter from the bladder, which troublesome symptoms rapidly subsided on discontinuing the medicine.

OBSERVATIONS

ON THE

NATURE AND TREATMENT OF THE
MORE IMPORTANT DISEASES
OF THE NERVOUS SYSTEM:*With Illustrative Cases.*

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[Continued from page 766.]

SECT. III. CHOREA.

CASE X.—A girl, aged 11, was seen October 10th, 1829, affected with severe pain in the forehead, and sleeplessness; fits of loss of sense, attended with a heaving at the præcordia, and a noise in the throat as if strangling; then with twitches in the arms, and a falling down, as if from sudden loss of power in the legs; the pupils dilated.

Leeches, purgatives, alteratives; and blisters to the neck and sacrum.

The 26th, she was much better.

A third of a grain of nitrate of silver thrice a day.

29th, the head worse.

Mercurial purgatives.

Nov. 21, a gait in walking as if more more complete chorea forming; belly tumid, lax; tongue red.

Antacids and henbane.

The diarrhœa quickly ceased, and as she exhibited a cold nervous aspect, the nitrate of silver was resumed. After this more headache, and a return of the spasms, for which mercurial purgatives were given with relief; then a cough, which was relieved by squills and ipecacuanha. After this, pain in the head and feverishness required leeches and purgatives; but about the 23d the symptoms became severe, in evening paroxysms, with loss of sense, and spasms of the eyeballs.

Head to be shaven, an issue, and purgatives.

By the 8th of December the improvement was marked; carbonate of iron was then ordered, and in a fortnight more she was cured.

CASE XI.—A boy, aged 10, after a severe chill on December 29th, 1829, was affected with pain at the forehead, costiveness, and severe chorea.

January 6th, the countenance fatuous; little fever.

Leeches, mercurial purgatives, antimony, and rest in bed.

The 8th, the head relieved; spasms the same; costiveness remaining.

Purgatives.

In the next four days there was little amendment, and he was bled to six ounces; the coagulum was loose and florid; and on the 13th, the pulse being soft, nitrate of silver was given, and clysters repeated.

On the 14th, severe spasms of all the muscles, particularly of the jaws, on attempting to drink; saliva spat involuntarily from the mouth; the bowels purged of a vast quantity of stool.

On the 17th, four half grain doses of the nitrate were alone given; and in the evening three large feculent stools were passed.

18th, headache and spasms severe; pupils large and sluggish; tongue dry, and its papillæ swollen; the pulse weak.

The nitrate of silver stopped, twelve grains having been taken in the whole; the scalp blistered; leeches and mercurial ointment on the head; calomel, scammony, and tartarized antimony, with salines.

The 20th, purged of more natural stools, and the look of oppression relieved; he has slept well, and speaks intelligibly for the first time.

The 25th, exhaustion; pulse 80, weak; tongue aphthous; no salivation; free purging; the respiration a succession of deep sighs at long intervals; severe spasms of the limbs; much emaciation; inability to speak; sleep much disturbed; eyes vascular and turgid, but the pupils more natural, and the countenance clear and intelligent. He has used a drachm of calomel in three weeks, and half an ounce of stronger mercurial ointment.

Salines repeated.

27th, less exhaustion; bowels natural; and he speaks a little.

28th, better.

Sulphate of quinine, and meat broth.

February 4th, chorea nearly gone.

Oxide of zinc, with rhubarb.

In ten days more he was quite well. This boy, in the spring of 1831, got a similar but less severe attack, and

was cured by similar remedies; and in the spring of 1832, he had chorea of the right limbs alone, without the fatuous expression of the countenance; the pulse strong in the left arm. He was cured by purgatives of calomel, jalap, and gamboge; a blister and rubefacients on the spine; and then carbonate of iron with valerian.

CASE XII.—A girl, 14 years of age, was affected, March 12th, 1831, with severe chorea. On the 18th the spasms were incessant; the tongue and jaws much affected; the bowels costive; the pulse low.

Cupping-glasses on the spine, and mercurial ointment; clyster and purgatives; salines and colchicum.

The 23d, the spasms excessively strong.

Remedies continued.

26th, a little better; no pain; tongue clean; pulse soft.

Clyster repeated.

28th, spasms better, but sleeplessness distressing.

Mercurial ointment continued.

31st, the mouth sore from mercury; convulsions of the face and limbs continue, but are less severe; more natural appetite, and natural stools.

Clyster and ointment as before.

April 16th, chorea less violent.

By the 29th she was nearly well, after having been electrified seven times.

CASE XIII.—A robust boy, 3 years of age, was observed, in the winter of 1824, to be affected with sudden but momentary failure of voluntary power in the right side, so as to make him fall down sideways; there was also, at intervals, a convulsive movement of the limbs, and an occasional squint. The stools were without bile.

Leeches to the neck; the tepid bath; purgatives and calomel.

After this he voided worms, and, on taking an emetic, he brought up one from the stomach. In a few days the bowels were natural, but the failure of voluntary power continued. Small doses of sulphate of zinc, with opium, were then given, and the symptoms ceased.

The case resembled that named by Sauvages *Scelotrybe instabilis*, a variety of chorea. The affection returned,

after an intermission of five months, at the end of spring; when small doses of oil of turpentine were given, after which more ascarides were voided. He was then vomited and purged by a large dose of the turpentine, followed by calomel and scammony; and by a blister to the neck, and rest in bed, and continued purgatives. He soon got quite well.

CASE XIV.—A female, aged 20, who had suffered in the latter months of 1842 with severe headache, and various nervous symptoms, referred to a spinal disease, came under my care in January 1843, in a debilitated state, and with the headache unrelieved; no disease of the vertebræ could be detected. On cutting off the hair, sponging the head, using citrate of iron, with a mild tonic diet, and taking her out of the bed-room, she soon became convalescent, and remained in good health to September of the present year, when, after spraining her foot, an occasional twitching of the mouth, eyes, and arms, was observed. About the middle of October she was recommended to pour cold water on her foot for the sprain, and shortly afterwards was attacked with a severe sore throat, which yielded to the ordinary remedies, but was followed in a week by hemiplegia of the right side, with hysteria, and severe chorea of the face and left extremities. I saw her in consultation with her very intelligent surgeon, on November 12th, when the right arm was insensible and powerless, the leg also palsied in a slighter degree; the face affected with spasms; the eyes very protuberant, and the pupils dilated. She complained of pain at the occipital region and right temple; and the cervical vertebræ, and the lumbar and abdominal muscles were very tender; her sleep heavy, and manner fatuous; the tongue clean; the pulse rather low; the skin cold; the appetite voracious; the bowels had been torpid until regulated by medicine; the menstrua were regular.

The hair to be cut off, and the head sponged with an evaporating lotion; dry cupping-glasses on the neck; aloes with blue pill daily, and sulphate of potass in a bitter infusion, to purge actively.

In a week the pain at the hind-head was relieved, but the palsy remained; the chorea was stronger and more general; fatuousness increased, with fits

of severe mental irritation, and violent hysterical symptoms; her speech much impeded; the pulse not disturbed; the extreme circulation low; the eyeballs more prominent; the pupils sluggish, but not fixed; the stools unhealthy, containing a quantity of black bile. On one day, when the aperient was omitted, the spasms were much worse.

The head to be shaven, the occipital region blistered; cupping to six ounces on the neck; the limbs to be swathed in flannel; iodide of potassium in infusion of rhubarb, and compound scammony powder, to purge daily.

In a few days the fatuousness and the palsy were lessened, but she now complained of acute pain at the right temple, and at nights had strong fits of hysterical and maniacal excitement. The medicines afterwards acted well on the bowels, and she ceased to complain of the head; but it was hot, and the pulse had risen to 90. This exacerbation seemed to be owing to an error in diet, as eggs, coffee, cocoa, and sal volatile, had been given. A stream of cold water was then ordered for the head, the room to be darkened, the weather being sunny, and fresh air admitted; and on the 25th the paroxysms were milder, the mental powers at times natural, the palsied limbs improved, but the spasms of the eyelids and jaws, the projection of the eyes, and severe pain at the right temple, continued. On knocking this part gently, the pain was increased, and a spasm and swooning induced.

An incision, three inches long, was then made along the edge of the right temporal muscle, down to the skull; and the scalp being very vascular, was allowed to bleed to six or eight ounces. She then became faintish, a warm perspiration broke out, and the pulse fell from 92 to 66. She afterwards slept calmly, and the next day exhibited the most decided improvement, expressing delight at the relief of the pain. The wound was then dressed to keep up suppuration; and croton oil with colocynth, and small doses of the bichloride of mercury with hydrocyanic acid, were given for ten days, during which her amendment was uninterrupted. About December 8th, however, the issue had nearly healed, the liver had become disordered, the stools scybalous and clay-coloured; the palsy and the spasms of the face had returned, with

fits of hysterical excitement, fatuousness, and disturbed sleep. After some blue pill, with aloes and saline purges, the stools were improved, and the nervous excitement lessened; but on the 14th the eyeballs were again prominent and squinting, the pupils dilated, the arm powerless, the head severely pained, and percussion of it gave evident distress; the pulse was quick, and the tongue clean.

The head to be again shaven; antimonial-mercurial ointment on the scalp; the neck blistered, and alterative aperients continued, with a vegetable diet.

On the 16th, the symptoms not being better, eight leeches were applied, and six more on the following day, with little effect.

On the 19th there was more of a comatose tendency, with severe pain in the occipital, frontal, and left temporal regions; and slight percussion of the hind-head again induced spasms of the left arm and leg, and hysterical sobbing; the left eye particularly prominent and vascular,—its pupil dilated; the face flushed; the pulse quick and full, particularly in the left wrist; the speech indistinct, and the tongue put out with difficulty; the left arm was now the palsied limb, the left leg also weak. The bowels had been freely purged with aloes and calomel, and the scalp extensively pustulated with the ointment. Tickling the soles of the feet had no effect on the functions of the spinal chord.

It was evident that while the right portions of the encephalon were relieved, the left had become affected with severe congestion. The next day she had passed a better night, after taking antimony with nitre, and a black draught; but the pulse was 120, and the other symptoms persisted. A deep incision, five inches long, was now made along the left side of the head, and allowed to bleed to ten ounces; after which she spoke distinctly and sensibly.

Nitre, with tartarized antimony, ordered twice a day; an aperient every morning; mercurial ointment on the thighs, to salivate.

21st, no complaint of the head; no spasms. The head poulticed.

23d, the eyeballs still projecting; the left arm still powerless, and at times tossed with spasms; the right able to

grasp firmly. No hysterical symptoms since the incision.

It was manifest to her medical attendants that considerable serous effusion had taken place in the left ventricle; but a confident hope of recovery was entertained. The same treatment continued.

27th, a delightful improvement; yet still slight palsy and spasms of the left arm; the issue discharging freely.

January 2d, amendment more complete; no spasms; no palsy; the eyeballs natural; issue in a good state; the mouth soreish from the inunction, but no salivation; she is able to walk from the bed to her chair without giddiness. Convalescence fairly begun; but the remedies to be continued for a short time, as a precaution against a relapse.

The 13th, progress to recovery satisfactory.

SECT. IV. HYSTERIA.

CASE XV.—A female, aged 22, on June 9th, 1828, after costiveness for several days, got severe pain in the head and stomach, followed by sudden and dreadful hysteria; the spasms of the limbs, eyes, and respiratory muscles, extremely severe; the face black from the interrupted respiration; the pulse extremely low. She was bled to twelve ounces in the fit; the blood was very florid, and the clot soft. Purgatives and clysters procured several stools; but in a few hours the spasms returned severely, when ammonia and a foetid clyster were given. In the course of the night the convulsions were so severe as to threaten suffocation; she had also acute pain at the hind-head, and in the chest, with a spasmodic cough, cold perspiration, and a very depressed pulse. On the spasms remitting, the pulse became natural. The hair was then cut off, ether and laudanum given in a clyster, and rubbed on the spine. In a few hours the spasms returned, with acute pain in the head, and throbbing; the pulse full. Senna and salines were given.

The 11th (third day), the spasms subsided, headache continued, with a furred dry tongue and a full pulse; two large stools passed.

Leeches, salines, and purgatives.

The 12th, copious purging of faeculent mucous stools, with relief of headache; then a return of convulsions,

and relief after a natural stool from senna.

The 13th, severe headache and tenderness at the epigastrium, with intense thirst; pulse natural.

Salines, laxatives; and a blister on the spine.

The next day much relief after natural stools.

15th, a return of spasms. Senna ordered.

The 17th, a nervous hysterical state; a cough, inducing spasms and hiccup.

Ammonia, valerian, camphor, and henbane; wine.

After this the hysteria ceased, but was succeeded by acute pain in the side, impeding respiration, which was relieved by leeches and purgatives; and in a few days convalescence was advanced. On the 26th, however, a severe convulsive cough, with convulsive breathing, and a little spitting of blood, were induced by mental agitation; which were relieved by henbane and assafœtida; and in July her usual health was restored by quinine and country air.

CASE XVI.—*Palsy of the hand connected with suppressed menstruation, cured by galvanism; succeeded by inflammation in the brachial and intercostal nerves? Morbid effects of loss of blood while menstruating; spasms of the heart, gullet, and respiratory muscles; tetanus and syncope. Singular morbid effects of galvanism.*

A female was affected on November 16th, 1819, with a sense of numbness, followed by a loss of muscular power and impaired sensibility of the left hand, without emaciation of it; and with occasional pain in the head, and costiveness; the menstrea had been suppressed for a long time.

Aloes, gamboge, and colocynth; ammoniacal liniment on the hand.

24th, more headache, with costiveness.

Twelve leeches to the temples.

25th, electricity to the hand daily.

Dec. 1st, headache and vertigo.

Leeches.

3d, pulse 100, strong.

Bleeding to sixteen ounces; other remedies continued.

4th, head symptoms relieved; palsy as before.

A blister on the fore-arm.

9th, hot brine, and afterwards dry hot salt, to the arm.

18th, galvanism to the hand,—now in sixth week of palsy, with little change.

24th, galvanism applied three times in the day, as strong as could be borne; a sensation of warmth from it; no increase of motive power.

Remedies continued.

26th, a power of moving the thumb and fingers; the sensibility of the hand so much increased, that during the application of the galvanism warm water to it is intolerable, as well as the brine and hot salt.

28th, galvanism for two hours and a half a day, at three times; palsy much improved; now able to lift a heavy weight. The galvanism was continued for some days, and then omitted, because of the pain it induced.

January 4th, motive power again impaired; severe pain felt shooting up the wrist, on immersing the hand in hot brine.

10th, galvanism repeated. In a few hours she complained of severe pain in the left side, increased on a full inspiration, with a cough, while menstruating.

On the 13th she was bled to twelve ounces.

The 14th, pain at side and cough continuing, and the pulse 95, full, and hard, she was again bled to twenty-four ounces, in the morning, with immediate relief of the symptoms, and the bowels were purged by medicine. At noon day pain was still felt on inspiring, and the pulse 96 and full; a blister was then applied on the side. In the evening, the pulse being 80, and full, with much headache and pain in the side, bleeding was repeated to twenty-six ounces, without any relief of the pain; and instantly afterwards she became deadly faint. On the head being placed low, and the jugular veins compressed, sense was restored; and as she recovered she was seized with dyspnœa, which increased in severity until half a drachm of laudanum and sulphuric ether was given. During the night the sleep was broken with two slight attacks of a similar nature, and the next morning the side pain was no better, and still increased by a full inspiration; there was also headache, pain at the epigastrium, thirst, the

tongue natural, the bowels purging freely, the pulse 98, strong.

Twelve leeches on the epigastrium; inhalation of steam.

Soon after the leeching syncope returned, and was followed again by severe dyspnœa. She then complained of a great weight pressing on the sternum, taking her breath away, and again became insensible. The inspirations, at first 40 in a minute, then more and more convulsive, and never under 80. The pulse, at first 100, and full, then rose to 150, and could scarcely be felt; the eyes became fixed; the countenance expressive of agony; some convulsive startings, similar to those she had been affected with during the use of electricity, were observed on the arms and chest during this paroxysm. On becoming more sensible, she felt the greatest difficulty in swallowing; the attempt seemed to excite convulsions in the gullet, and complete opisthotonos for two minutes; the very idea of swallowing seemed also to excite spasms. During this paroxysm, which lasted an hour and a half, she took 80 drops of laudanum with sulphuric ether; but as the ether seemed to excite spasm, it was exchanged for spirit of nitrous ether. A hot foot-bath then seemed to rouse the circulation; and on recovering she complained of pains in the side, palpitation, and a tendency to fainting, with anxiety at the præcordia, and headache. At 6 P.M. twenty leeches were applied to the epigastrium, with relief of pain, but with increase of the dyspnœa; and in an hour and a half a similar paroxysm to the former, but more severe, and lasting for five hours,—fits of syncope alternating with convulsions of three minutes' duration, and generally mitigated by ammonia to the nostrils, and finally relieved by repeated doses of laudanum and spirit of nitrous ether. In 48 hours twelve drachms of the former, with two ounces of the latter, were taken.

The 16th, a sleepless night; palpitation and a tendency to syncope in the erect position; headache; thirst; pulse 88, full; side-pain diminished; bowels regular.

A hot bath, and ammonia, with laudanum, and tincture of castor, in small doses; a blister on the præcordia and an emollient clyster.

The 18th, better.

20th, five drops of tincture of foxglove given every three hours, which excited vomiting; clysters of laudanum and assafoetida relieved her.

24th, still better as to the hysteria, but nausea and vertigo distressing; the motive power of the hand weak.

Fætid clysters given, and galvanism resumed.

Feb. 1st, pain in the palm of the hand by slight pressure, or an attempt to extend it; general nervousness, and debility, and costiveness.

Galvanism and purgatives.

In the evening pain at the side, and a paroxysm of quick convulsive breathing, with loud moaning. The palsied hand kept on the precordia; the other, and the general body, in convulsive movements; the pulse very quick, and at times imperceptible. Two drachms of laudanum were given in two doses, at an interval of half an hour, without effect. At 10 P.M. the body and shoulders were drawn forward by tonic spasm; the respirations beyond 100 in a minute; three drachms of laudanum then given, in three doses, at short intervals. At midnight little improvement; two similar doses of laudanum, (making seven drachms in the course of the evening) with nitrous ether, were then given, and the paroxysm declined. The sleep was disturbed by dreams, and a narcotic influence remained for several hours. The next day, at noon, the affection of the chest had subsided; the pulse 88, respiration calm, thirst intense, and some headache.

Nitrous ether continued.

In the evening a similar but milder paroxysm; relieved by three drachm doses of laudanum, and a turpentine clyster; after which she slept well.

On the 3d, the symptoms were improved, except thirst, with a white dry tongue, and costiveness.

Extract of colocynth.

4th, two easy stools; abdomen still tumid.

Infusion of roses with salts.

5th, a sense of tightness at the chest; inability to inspire deeply.

6th, a slight paroxysm, for which a drachm of laudanum taken. Afterwards purgatives were continued, and she ceased to be under medical care; but the weakness of the hand remained.

This extraordinary case I saw in the practice of a physician now deceased.

[To be continued.]

MEDICINE STAMPS AND QUACKERY.

To the Editor of the Medical Gazette.

SIR,

ALLOW me, at the present crisis, to call attention through your columns to a few points connected with the above. First—as to medicine-stamps. You lately remarked, and truly, that here we have “an object of state finance.” Your data gives an average of about £32,595 annually, for the last thirteen years; and mark a gradual decline, during that period, from about £45,000, to something less than £29,000. Can we not, then, afford to forego so small an item of state finance? especially when we remember the very questionable propriety of its source, and the readiness with which such a sum might be otherwise raised. You suggest that we may be asked, “would you prevent a man profiting by a useful discovery in medicine, when, in other departments of science and art, the State allows individuals to protect themselves by concealment (?), or affords them the exclusive use of their invention for a certain time, if they choose to make it public?” You meet such apparently reasonable interrogatory, most justly, with the answer, that nearly all medicine patents “have been mere impositions.” We may explain ourselves more fully to the non-medical community, who, after all, must have the final adjustment of the question. We may inform them that very many quack-nostrums are downright deceptions; and that such others as are serviceable, are, in almost every case, well-known common remedies in the profession; the oils, the salves, the pills, and what not, which the quack puffs in the columns of our newspapers, being, almost without exception, where they do possess any ascertained virtues, pirated either from our own extemporaneous prescriptions, or our pharmacopœia. Nor is this all with respect to these so-called “discoveries in medicine;” let us ask our non-medical friends—whom we may reasonably forgive, especially at this juncture, for evincing jealousy

of our motives, and scepticism as to the validity of our statement—if, on the one hand, they ever heard of a discovery or improvement, in other branches of science and art, that was patented and handed down, from age to age, without the public ultimately reaping the benefit of it, without let or hindrance? or, on the other hand, if they ever heard of a quack nostrum that was first minutely described and explained at head quarters, and, in the course of time, divulged for the unrestricted benefit of the public, after that the “patentee” had made his own out of it? We may confidently answer, never. If, then, it still be desired to retain so paltry a sum, drawn from so disreputable a source, why not place the quack at least on a level with other “discoverers and improvers?” Why not require an explicit statement of the nature, composition, and presumed or ascertained effects of every nostrum, as in the case of patents, and, in this as in other cases, let the public, in due time, have the full and free benefit of such “discoveries?” and why not prohibit the sale of every unknown drug that is not thus patented, unless specially prescribed for a particular case? And this brings us, in the second place, to the question between registered practitioners and quacks. Sir James Graham, very laudably, proposes to draw public distinctions between these two classes of professors of the healing art—between the men who have spared no trouble, time, or expense, in the acquisition of knowledge in the dissecting-room, the laboratory, the fields, and the hospital, and the men who, with little or no such expenditure of their energies, fraudulently assume the titles so hardly earned by others, or undertake the sacred and responsible duties of physical guardians, even without such cloak. Such distinction as that expected from registration is highly to be prized; in the opinion of many respected members (if not all such) in our profession, the registration plan is about all that can be done, under a free constitution, towards mitigating the evil of quackery—its suppression being by them deemed impossible. Much of the efficacy of the scheme will undoubtedly depend on its being universally acted on by the profession.

Inducements are, perhaps, all that

can be suggested; and if no unregistered practitioner can hold office, or recover fees, by law, probably nothing further is required to cause every one of us to enrol himself. The efficacy of registration, again, only tends to the exclusion of such quacks as assume the titles of the profession; and although certainly, as my friend Mr. Carter rightly observes, these are decidedly the most dangerous of the murderous crew, yet they are but a section at present, and, hereafter, would still exist as avowed and lawless practitioners. Sir James, then, recognises and defeats the fraud, at present practised by many quacks upon their dupes, of assuming University and College titles, while such creatures are—it may be unavoidably—left at liberty to assume the character and office of members of the healing art. Medical men are severely punishable for palpable ignorance of the principles, or carelessness in the practice of their profession; such an arrangement seems well calculated to ensure a full exercise of their talents from the commencement to the end of their career; and no less calculated to beget and maintain for them the confidence of the public. It is proposed by the Home Secretary, and Mr. Carter seems to hold, also, the opinion, that quacks should be similarly amenable to the law; but if the view just taken of the effect or tendency of such “check” be correct, would quackery not rather be cherished by it, through the knowledge, on the part of the public, that the vile pretenders to the medical character were practising in honest and well-grounded confidence, inasmuch as they were doing so under an imminent peril? Although apparently a strange proposition, may it not in reality be worth while to weigh well the policy and propriety of subjecting the quack to any such restriction? Or if Sir James, in his well-meant endeavour to protect the public as far as possible against the most heartless and ruthless of swindlers, be averse from releasing (and thus apparently patronising) them, if still he should incline to the laying on of additional embargoes, might he not, further than by his present plan, attain his end by enabling the dupes of quacks to compel them to disgorge in cases of unsuccessful treatment? Unregistered men are not to recover fees by law;

this, like ineligibility to public offices, is, as you properly pointed out, a mere dead letter, quacks having no book-debts, unless attested bonds can be so considered. Might all such bonds not be rendered null and void? Might not quacks—as assuming the power to cure diseases with the seat and nature of which they are absolutely unacquainted—and as unregistered persons, in case of their unqualified promises, be made liable to prosecution for obtaining money under false pretences? Some such plan is required; for, in truth, we cannot say that, although practising as avowed quacks, their dupes applied to them wilfully and with their eyes open; the public know not the quack otherwise than as a self-taught genius, or fortunate discoverer in the healing art, and as a man justly, and (as they think) for very obvious reasons, dreaded and persecuted by a humdrum body of disciplinarians, who are but too fortunate in having the law at their backs, but for which they would soon be sent to the wall by their naturally more gifted rivals,—a conspicuous, but far from unique example of that tendency, inherent, and so strong, in all of us, to admire and encourage, and expect wonders from, a man, in proportion as his opportunities for acquiring a knowledge of his art in the ordinary way have been restricted. The difference, however, lies here; in statuary, in painting, or in the acquisition of languages, a man's actual proficiency is carefully tested, and justly estimated. With the quack it is precisely the reverse: his capabilities never have been, and as careful is he that they never shall be, tested. The only guarantee that the public can have of medical competency is through the accredited boards of examination, and through the duly authenticated publication of hospital and dispensary practice. From all competent inquirers the quack shrinks; no law is requisite to prevent either his appointment to public offices, or his appearance in open court to extort payment from his miserable dupes: the former he instinctively avoids, the latter he takes good care never to require. To open the eyes of the public, it is not merely necessary to apprise them that the quack is neither physician nor surgeon; they must be taught, if possible, that he is an empty and unscrupulous pre-

tender to knowledge and power that can only be acquired where he has never been.—Believe me, sir,

Yours very respectfully,

R. ELLIOT, M.D.

Member of the Council of the North of England Medical Association.

March 5, 1845.

[A correspondent suggests that it would be a good plan for quack advertisements to pay ten times as much as they do now, particularly as the duty is materially lessened upon all drugs, whereby the impostors may be more than ever offensive; or that the stamps on boxes, bottles, &c. ought, at all events, to be much increased, as the only means of keeping quack puffs out of the public papers.—*Ed. Gaz.*]

ON HEPATALGIA.

By R. H. ALLNATT, M.D., A.M., F.S.A.

To the Editor of the Medical Gazette.

SIR,

RECENT researches into the pathology of the intestinal mucous membrane have especially directed the attention of modern practitioners to this hitherto comparatively unexplored field; and inflammation of the liver, and the subsidiary diseases to which they owe their origin, have received of late years peculiar elucidation from authors. The subject, however, of my present paper has been by almost every systematic writer entirely overlooked, or touched upon in the most cursory manner possible. This is the more extraordinary, as it is a disorder of very common occurrence; but perhaps our surprise should cease when we consider how generally hepatalgia has been confounded with active, or sub-acute inflammation. I purpose, therefore, giving a few brief details of its leading features.

Andral has introduced the following observations in his "*Clinique Médicale*." "We sometimes," he says, "observe in the region of the liver severe pain, which cannot be accounted for, after death, by any lesion of the viscus or its excretory ducts. These are cases of hepatalgia, or hepatic colic. The circumstance just mentioned, and, moreover, the nature of the pains, their intermission, and the state of good

health which often exists in the intervals, all lead us to believe that the pains have their site in the numerous nervous filaments which are distributed to the liver, and which are derived either from the pneumogastric or the great sympathetic."

This is at once a condensed and correct description of the seat and nature of the affection. It will be observed that it is essentially a nervous disorder, and it differs, of course, in all important points from inflammation. The diagnostic symptoms are well marked, and are peculiarly important, inasmuch as the practice which is founded on them requires to be diametrically opposite to that which we are called upon to pursue in cases of inflammation.

Although the pains accompanying hepatalgia may be as intense as those of hepatitis, and, in many instances, perhaps more urgent, they are not constant, but are at the outset, and frequently also during the whole progress of the disorder, paroxysmal, affording in the interval a complete immunity from pain. The pathognomonic signs indicative of inflammatory action of the liver, are pyrexia, tumefaction, great tenderness in the hypochondrium, frequent and strong pulse, thirst, furred tongue, and vomiting, sometimes of a bilious, and, at other times, of a dark-coloured secretion, as the substance of the liver more or less partakes of the invading disease. The bowels are irregular in their action, the evacuations presenting a great variety of appearances, according as the biliary secretion is more or less affected; and the urine is scanty and high coloured. In hepatalgia, on the contrary, these signs are invariably wanting; there may exist, indeed, constant pain and tenderness over the region of the liver, increased to a certain degree by pressure, but manifest exacerbations, even in the worst cases, occur, which are sufficiently indicative of its paroxysmal character. The functions of the organ may proceed uninterruptedly as in its healthy condition. The tongue may be quite clean, or sometimes, in the centre, there may be a gentle creamy fur, and the urine is generally increased in quantity, and is of a lighter colour than ordinary: this I have found a characteristic symptom of many nervous disorders.

We have been contemplating the leading features of hepatalgia in its pure uncomplicated state, but it is comparatively rare that we meet with this condition, as it is generally associated with other decided manifestations of the neuralgic diathesis. However, it does occur, independently of these complications, and I regard the following case as a good example of pure isolated hepatalgia:—

The Rev. Mr. H—, a gentleman of active habits, and zealous in the performance of his clerical duties, was seized with a slight intermitting pain in the region of the right hypochondrium, which attacked him daily, on its accession, with something like periodic regularity. On the accession of the paroxysm, he was free even from a sensation of uneasiness (so perfect was the immunity in the intervals) until the succeeding attack. As his digestion was good, appetite unimpaired, and the pain comparatively trifling and of short duration, he did not deem it requisite to seek professional advice: and so the disorder was suffered to continue unalleviated, until it assumed a more formidable aspect. He now consulted a London practitioner, justly celebrated for the general correctness of his advice, who treated the case as one of chronic inflammation, and ordered a steady course of mild mercurial preparations. Under this system, the patient's sufferings were aggravated to a degree of intensity that quite alarmed him; and the more urgent they became, the more decided were the endeavours of the medical practitioner to subdue the "inflammatory" action, by getting the system as speedily as possible under the influence of the mercury. Finding he obtained no relief, and having a firm persuasion that a palpable aggravation of his suffering was occasioned by each dose of the medicine, he consulted me, and the following is a detail of the then state of the case:—The right hypochondrium was affected with constant pain, acute, and lancinating, which was greatly increased by slight—in fact, the gentlest—pressure; even the weight of the bed-clothes produced insupportable agony, so that he was invariably obliged to cast them off when he retired to rest, and in the day to sit in loose, unfastened garments.

During the first examination, having

engaged him in a conversation on an indifferent topic, thus diverting his attention from his malady, I pressed firmly upon the affected part, and so far from heightening the pain, it rather produced a temporary alleviation. Exacerbations generally occurred about two hours after dinner, and continued with great violence until, as I imagined, the food had passed from the duodenum, and ceased to excite by its action the morbid sensibility of the liver. The bowels were regular, and the motions healthy. The urine copious and limpid; and, in short, in the whole train of symptoms there was nothing indicative of inflammatory action, or of any disturbance of the hepatic functions, except the persistent pain. Having arrived at this conclusion, I immediately ordered a discontinuance of the mercury, placed my patient upon the plan hereafter to be detailed, and in the course of three or four days he became perfectly free from the attacks, and was enabled to resume his professional duties, which had hitherto, for some months, been completely abandoned. A period of upwards of two years has now elapsed, and there has been no return of the hepatic tic.

We will now consider a case of hepatalgia in its complicated form: that is, in its relation with peripheral neuralgia, in whatever part of the body its manifestations may occur: and this is by far the most common state in which we are called upon to observe it.

If there be, in the whole history of neuralgia, any isolated point of greater importance than another, or one that will more aid us in the discovery of its true proximate cause—the present hidden and mysterious bugbear of the practitioner—I would lay my finger here. To me, it is astonishing that authors, whose pen this fertile subject has inspired, have, as it were, with one consent, passed over in solemn silence the apparent fact of the manifold relations and dependencies assumed by this disorder. However, I will not anticipate, but proceed to submit a case which is rather a rule than an exception, similar manifestations presenting themselves in ninety cases out of a hundred, and which only require the commonest share of attention to be rendered apparent.

Mrs. H. F., a prematurely aged

woman, had suffered from facial neuralgia in its most violent form during a period of eight years. She had been treated by various medical practitioners of her native town, and had been dismissed from the Gloucester Infirmary as incurable. All the ramifications of the trifacial were affected; the lower and upper jaw, cheeks, forehead, eyes, and tongue. During a paroxysm, her face was thrown into contortions, and hard knots were formed in the course of the nerve. Tears flowed abundantly from the eyes, and the salivary glands poured forth their secretion as though she were in a state of profuse pyalism. Altogether she presented a most pitiable spectacle. The most important diagnostic symptom, and that for which this case has been principally detailed, remains to be related. On the cessation of the peripheral neuralgia, the liver was attacked with an almost insupportable pain; and when this viscus ceased to suffer from the metastatic hepatalgia, a transference of the morbid action invariably occurred in the branches of the trifacial. There were, in fact, alternations, transmitted from seat to seat, with unceasing regularity; but they never co-existed: so that the patient was enabled to foretell the locality of the anticipated paroxysm with unerring certainty. I do not venture to say that every case is so well marked as this, but I do assert, that in the great majority of cases we have more or less clear evidence of this alternate action.

I deem it unnecessary to swell this paper by accumulating evidence; more especially as I have published in this journal a lengthened correspondence containing the result of my experience on the present question; let it suffice for me to state, that in every case of local neuralgia, if the practitioner will search out patiently the symptoms as they arise, he will be surprised to find how strong a link in the associated chain of events will be supplied by the disorders of which we have spoken: and if the matter be new to his investigation, he will also discover that hepatalgia is an affection of much more frequent occurrence than has been admitted by our modern pathologists.

The treatment of hepatic colic, whether in its isolated or complicated form, is very simple, and merely requires the

combinations which are found to be effectual in other cases of neuralgia. Mercury, as in the *douloureux*, heightens the affection, increases the general irritability, and renders the system universally more obnoxious to the incursions of the morbid nervous sensibility. Carbonate of iron—the rage of the day—is, if possible, even more destructively pernicious; and I would ask, if my assertions be correct of the dependencies of the disorder (and they may easily be put to the test,) whether or not the action of a powerful tonic is likely to prove beneficial in any one of its earlier stages? Yet it has been administered with reckless daring in all the phases and all the complications of neuralgia. Gentle purgatives, combined with colchicum, ipecacuanha, and hyoscyamus, will seldom fail to work a speedy cure: and if the constitution have suffered from protracted unmitigated pain, alkaline vegetable tonics will effect that which we might in vain expect from the rough insoluble mineral preparations.

Parliament Street, Whitehall,
March 10, 1845.

OBSERVATIONS ON DIGESTION AND DIET.

By DR. WILKINSON, Bath.

THE grand result of digestion is the formation of the constituent parts of blood which principally consists of albumen, and as it is admitted that the nutritious quality of all food, whether vegetable or animal, is in proportion to the quantity of albumen contained, it must appear evident that the agent employed for its separation from the general mass must possess the property of dissolving the albumen. It is well known to chymical inquirers that this is readily effected by an alkali, whilst it is insoluble in acids or alcohol, or even in cold or boiling water. Liebig, in his admirable work on Organic Chymistry, considers one of the principal agencies of saliva is from its entangling, during mastication, atmospheric air, and that the oxygenous portion enters into combination, while the other constituent part of the atmosphere, viz. nitrogen, is given out through the skin and lungs. He further says, that the longer digestion continues, that is, the greater

the resistance offered to the solvent action by the food, the more saliva, and consequently the more air, enters the stomach. Thus he considers rumination, in certain graminivorous animals, has plainly for one object a renewed and repeated introduction of oxygen; for a more minute mechanical division of the food only shortens the time for solution. As for the gastric fluid, he thinks that it possesses a property of transforming those constituents of the food, which by themselves are insoluble in water, in virtue of a new grouping of their atoms, the property of dissolving in that fluid. He observes, that during digestion the gastric juice, when separated, is found to contain a free mineral acid, the presence of which checks all further change. That the food is rendered soluble quite independent of the vitality of the digestive organs, has been proved by a number of the most beautiful experiments.

It is, I presume, admitted by physiologists, that the secretion of the gastric fluid, as well as all other secretions, results from the agency of the principle of vitality, and, when the secretion is effected, the future changes are chymical. Liebig entertains an idea that, with respect to the gastric fluid, it possesses some unknown power of effecting a transformation in the constituent parts of the substance it is destined to act upon, without any apparent material communication. I am not acquainted with any analogical experiments in either synthetical or analytical chymistry to support such an opinion.

The illustrious Newton states, in the 3d book of his admirable *Principia*, the following hypothesis:—“*Causas rerum naturalium non plures admitti debere, quàm quæ et vera sint et eorum phenomenon explicandis sufficiunt*.”—and this hypothesis he thus illustrates—“*Natura enim simplex est et verum causis superfluis non luxuriat*.” With respect to Liebig, no person can appreciate more highly his chymical talents than I do; yet it appears to me that, in its application to many physiological operations, he has involved himself in difficulties which he might have avoided, by adopting that simplicity recommended by the great British philosopher in the above quotation. It must, however, be acknowledged that we owe much to this celebrated chym-

mist; and the few objections stated by Dr. Bostock and others may be compared to those maculæ (or spots) on the sun's surface, visible only to the telescopic observer, and not accompanied by any sensible diminution of its splendour.

In ruminating animals, the muscular structure of the œsophagus is admirably calculated for that tortuous motion remarked in the throat whilst chewing the cud; and the cause is very observable by dissection of this part. After being exposed to a gentle boiling heat in water, two rows of muscular fibres, resembling a double corkscrew, are unfolded, and, when in action, may be compared to those wells which have two buckets, the descent of the one being necessary for the ascent of the other. It is well known to observing agriculturalists that if the cow or the sheep should by misfortune drop the cud out of the mouth, it cannot raise a fresh portion by its own natural power; as the descent into the third stomach of that portion which has been a second time masticated is necessary to the elevation of a corresponding mass from the second stomach. When such is the case, the animal is remarked to pine, to lose its appetite, in consequence of the digestive process being interrupted, and in most cases it is found necessary to kill the animal. Nature, for the protection of the cud, has rendered the upper part of the tongue, near the throat, of a spiculated roughness, the spiculæ so arranged as to prevent any easy loss of the cud. In Switzerland, attempts have been made to substitute an artificial cud, made of boiled potatoes and sugar, but I believe without success. Upon this interesting physiological principle I have conversed with many eminent graziers, and who all concur in opinion that the greatest attention is necessary to prevent the dropping of the cud, particularly guarding against a too watery condition of food. The accident is soon rendered apparent by the animal no longer taking its usual food, no longer reposing on the ground for the purpose of rumination. During the period the animal is fed solely by milk, there is no ruminating process: in such cases the second and third stomachs are entirely inactive, and the digestive product from the first stomach is conveyed by a tube to the fourth. For

the illustration of this, my learned friend, Professor Owen, informed me that in the Museum of the College of Company they have specimens of this tube in the stomach of a milch calf. As soon as the animal commences with graminivorous food, the tube becomes obliterated, and its new stimulus on the second and third stomachs gives rise to the ruminating process.

When chyle has been intermixed with the biliary and pancreatic secretions, and highly magnified, there appears round each globule a greenish areola, which by gently drying assumes a reddish tint. May we not attribute to the secretion of the liver a four-fold action—1st. A secretion of soda to convert the chyme into chyle; 2d. Imparting the colouring rudiment to the globular particles; 3d. From its bitter principle, or picromel, acting as an antiseptic to the intestinal contents; and, 4th. By its stimulus, producing that peristaltic motion necessary for its ultimate evolution.

It is a law in nature, that two actions cannot go on in the same portion of matter at the same time. If the secretion should be deficient, or the stomach surcharged by its contents, the proper separation of the albumen is prevented, fermentation takes place, and carbonic gases principally are evolved. Thus sheep feeding in rich clover pastures frequently overload the first stomach, so as to prevent the communication into the second; the food too long retained ferments, and the animal becomes painfully distended by the developed gases, as to frequently require the operation of houghing. Sir E. Home states that liquids drunk by the animal pass at once into the second stomach, the entrance, at that period, into the first being closed. In the months of August and September, graminivorous animals, feeding on pastures that lie on the marl which covers some of the beds of the blue lias, are subject to that dreadful disease called scouring, although hay made from the same grass is not injurious. It generally appears after the first cutting. The loss sustained by this complaint, in the county of Somerset, has been stated to exceed £60,000 per annum. At the request of some members of the West of England Society, I was induced to examine this grass, and I ascertained that the injury arises from the formation of

acetic acid. This combines with the soda in the stomach. The result is a purging salt, and the food by the destruction of its solvent rendered inefficient; after being cut and dried, the acid is volatilized, and the hay is good.

Upon this principle are easily explained the thin and emaciated constitutions resulting from an indulgence in acids. It is well known that many young persons sacrifice their health from a dread of corpulency, by taking lemon juice, which, by its agency, destroys the solvent power of the soda; and what food is taken into the stomach passes off in an undigested state, the animal matter becomes rancid and putrid, the chyle and all the secretions in the same proportion deteriorated. We know that life can only be supported by matter which has constituted a part of an organized being; how these varied changes are effected by its agency, our limited powers cannot comprehend. May we indulge an opinion, that all nutrient food contains a living principle, which is added to the general stock, by which we are enabled to explain their growth? The late experiments of Prevost and Dutrochet have evinced, that when the fabric of an organized being is resolved into its simple constituent parts, each part has a globular appearance, possessing powers of motion, forming those monads which constitute the last link in the chain of organic life. The process of digestion is by this hypothesis considered as the power of separating these monads from their state of combination in the food taken, and assimilation is the deposition of them to their destined purposes. The albuminous globule, as well as that of the red particle of blood, is not spherical, but bears some resemblance in figure to that of the monas termo; and a further cultivation of this interesting subject would probably lead to an explanation of the powers of reproduction, and of many other important phenomena of nature. Thus it is well known to professional gentlemen that many organs in the animal body, when in a morbid state, are subject to become the repository of worms; their existence is not considered to constitute the primitive disease, but as the resulting product. They assume different characters, according to the nidus where they appear

to be formed: certainly most of those found in the human body are not observed in any other part of animated nature. Thus the tapeworm in man is jointed; in sheep and fish it more resembles a tape. Pallas and Bloch have found the tapeworm in a fœtus; and I had an opportunity in Geneva of seeing a tapeworm, 7 feet long, in a fœtus of six months. The mother being accidentally killed, gave rise to the examination. Not only in the intestinal canal, but in almost every part of the human frame, worms have been found: whence they originate is a question extremely difficult to answer; but I presume the difficulty would be increased by attempting an explanation on the Aristotelian idea of spontaneous generation. Although Blumenbach considered each articulation as a distinct worm; but Rndolphi and Bremser, who have paid great attention to this subject, deem it as one animal, and observe that the head has four trunks or suckers. I had once an excellent opportunity of seeing an animal passed off by a hospital patient, resembling a large leech in form but not in colour, about 4 or 5 inches in length. It was preserved in a covered vessel till the following morning, when the length was increased to many feet, and with all the character of the tapeworm, and which on examination proved to be the case. This remarkable circumstance throws great light upon the probable economy of this surprising animal. The joints do not commence near the part supposed to be the head, but a few inches below, leading to a supposition that in the living state it is an intestinal arrangement, folded in the body of the animal, in length only a few inches.

[To be continued.]

ANALYSES AND NOTICES OF BOOKS.

“L’auteur se tue à allonger ce que le lecteur se tue à abrégé.”—D’ALEMBERT.

Observations on Aneurism. Selected from the works of the principal writers on that disease. Translated and edited by JOHN E. ERICHSEN, Esq. (Printed for the Sydenham Society.)

THE success of the Sydenham Society, which has far exceeded the most san-

guine hopes that were entertained by its founders, is both a cheering evidence of the improved state of the literary condition of the profession, and a good augury for its future welfare; more especially so when, in looking over the list of the subscribers of the Society, we find that so large a number of the junior members of the profession have enrolled their names. The wide diffusion in an elegant form of the standard works of the great masters of our art, whether ancient or modern, cannot but be attended with the most beneficial results. Important, however, as the reprint of standard English works, or the translation of complete editions of the Greek, Latin, or Arabic authors may be, there is yet another form of publication that is, in our opinion, equally valuable, namely, selections from the works of ancient and modern writers on some of the more interesting medical and surgical diseases, by which means many of the most valuable essays that lay entombed in the old Thesauri, or in the periodicals of the day, and that are altogether beyond the reach of the mass of the profession, may be brought to light, and rendered accessible to every one. The volume now before us is the first that has been published in accordance with this plan, and we trust that it will not be the last. The manner in which Mr. Erichsen has executed the very difficult task that has been entrusted to him is most creditable to his talents and industry, and he has succeeded in producing a volume that will not only be a standard work of reference on the very important subject of aneurism to the scientific surgeon, but that will be of very great interest and utility to the profession at large. As the work is necessarily by this time in the hands of our readers, we will merely content ourselves with directing attention to the very complete bibliography that is appended to it, being a catalogue raisonnée of nearly two hundred essays and treatises, the preparation of which alone must have been a task entailing no slight labour, and the execution of which reflects much credit upon the taste, judgment, and acquirements of the author. We do not think that the Society can do better than to take the present volume as a model for the publication from time to time of similar *collectanea* on other important medical

or surgical subjects; as, for instance, hernia, lithotomy, hæmorrhage, injuries of the head, diseases of the nervous system, &c.

The London Medical Directory. 1845.
Containing the name, address, qualifications, official appointments, honorary distinctions, and literary productions, of every physician, surgeon, and general practitioner, resident in London. 12mo. pp. 180. Mitchell, Red Lion Court.

This is a considerably smaller volume than we had anticipated; we must say that our brethren have not abused the opportunity which the editors of the Medical Directory gave them of drawing forth their works to the best advantage. The list is, indeed, most creditable to the members of the medical profession. There are, unquestionably, but few drones in the hive; and, if all who occupy the foremost place, in regard to position and emolument, have not done the most to deserve them, still it is gratifying to observe that many who have worked hard have achieved eminence in consequence of that hard work we would fain believe, although we have known some guilty of the heresy of maintaining that the distinction came *in spite* of it. We have said that the volume was smaller than we expected it would have been; we confidently anticipate that next year it will have enlarged its dimensions considerably. The work is, in fact, a medical directory in more senses than one; it is not merely a list of the names and residences, but an index of the writings of the men now living and exercising medicine within the metropolis, and its precincts; and we venture to suggest to the editors the advantages that would attend upon a considerable extension of the work in the latter direction especially. One of the very useful books of reference in the present day is the *Lexicon of Living Authors* of Callisen, published at Copenhagen, and now extending to many volumes. The London Medical Directory, by giving the titles of each writer's papers in full, and an exact reference to its place of publication, would accomplish, in regard to the medical men of the metropolis, that which Callisen proposed to himself to effect with reference to the wider field

of Europe. Of the utility of such a catalogue there can be no doubt. This portion of the scheme was probably viewed by the proprietors of the London Medical Directory as only subsidiary or subordinate; extended, we believe that it will have the effect of giving the work a *permanent* interest. Meantime, and for what is effected, we think the thanks of the profession are due to the editors of the London Medical Directory. The publication of this volume marks an epoch in our professional annals; it is the first time that we have had a List of our own, like the army list, the navy list, and the law list; and, so far as we can judge, the list is wonderfully complete; omissions we should imagine there must necessarily be, although, with a solitary exception, we have looked for them in vain. We beg to recommend this very useful volume, the London Medical Directory, to all our friends, both of the metropolis and the country.

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The Structure of the Lungs; being the Warneford Prize Essay for the Year 1844. By JOHN MOORE. 8vo. pp. 106.

THIS essay is written, the author informs us, "for the purpose of showing, by the consideration of the 'structure and physiology of the lungs,' the 'wisdom, power, and goodness of God as revealed and declared in Holy Writ;' and though the conformation and office of each and every portion of the human frame be capable of affording proofs of these, there can be none better calculated to evince them than that whose special function it is to cleanse and vitalize the blood, on the good quality of which depend the maintenance and the due performance of all the other functions of the body." p. 3.

The author treats, first, of the variable structure of the respiratory apparatus in different classes of animals; the characteristics of the human lungs, their anatomical relation, development; the phenomena of respiration. The second part of the Essay, occupying about thirty pages, is devoted to natural theology, and is well suited to the Christian student.

Five lithographic plates are appended in elucidation of the pulmonic textures.

MEDICAL GAZETTE.

Friday, March 21, 1845.

"Licet omnibus, licet etiam mihi, dignitatem Artis Medice tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

DEATH FROM STARVATION.

IT appears from the statistical returns, that the average yearly mortality from starvation in this country amounts to 145. In many cases referred to this head, death was accelerated by exposure to cold and inclement weather, and by want of bodily raiment. Several of the wretched beings had been subjects of intemperance and disease; a few, to our nation's shame be it told, were suffered to pine and die in the workhouse, from not having the necessities of life provided by the officers of the poor law. No one will for a moment suppose that any of the individuals who thus perished through lack of food, could avert their fate,—certainly not. It was their poverty, and not their will, which consigned them to the dark and silent grave.

Not so the hapless attorney over whose corpse a coroner's jury was empannelled no later than Friday last. The deceased, although surrounded by plenty during his sojourn here on earth, was allowed to die like a dog, from inanition through starvation—a victim to one of the most contemptible systems of quackery ever palmed upon weak, ignorant, or credulous man.

Let us briefly consider the facts of the case. A patient, aged 29, is laid up with fever brought on by influenza, having shortly before been in very good health. Although *quite in his right senses*, and not betraying any thing strange in his manner, he sends for a homœopathic doctor, who attends him till near dissolution. By way of treatment, powders are administered at dif-

ferent times—minute doses of sugar of milk; for the most refined act of chemistry, while it can reveal the presence of the 500,000th part of a grain of arsenic, has failed to detect aught in the globules of homœopathy save sugar of milk. The regimen enjoined is water—nothing else; and during ten consecutive days, when in a weak and sinking state, his lips remained sealed to every thing but cold water. Eventually it was qualified by a fragment of toast, but the latter he dared not touch.

The homœopathic doctor, on being questioned by an anxious friend as to the nature of the patient's malady, observed that "his complaint was altogether very simple." It did not prove so in the sequel. By the eleventh day extensive hæmorrhage from the bowels supervened; and when the sick-nurse begged permission to give the man, prostrate by starvation and loss of blood, a little nourishment, the doctor condescendingly said, "she might give him a teaspoonful of beef-tea or two at that time." On swallowing this he exclaimed, "Oh, does it not relish?" He had previously got by stealth some thin barley water, which he equally relished, but requested that the jug might be hidden, lest the doctor should see it.

The friends of the patient, on being apprised of his alarming condition at the above period, called in a regular physician of eminence. This gentleman, on examining the patient, found his head free from fever or heat. The chest "was tolerably healthy; there was no active disease of the heart or thoracic viscera. The abdomen was flat, and so much drawn back towards the spine, that it would hold water like a small basin. The tongue was very clean; in fact, most unusually so. His pulse was about 88 or 90, but was extremely feeble. Witness found a piece

of white rag in his mouth, which he chewed to excite the salivary glands, and relieve his thirst. There was no ulceration of his throat, and his skin was rather below the ordinary temperature. His feet were rather cold. There was hæmorrhage from the bowels, and a great quantity of blood had been lost." . . . "He thought his state one of extreme danger." A general practitioner, whose co-operation had been required at the same time, corroborated the above testimony, and stated that the bleeding did not cease till a short time before the patient died, namely, the fourth day of their attendance.

The blood, which kept oozing away, seemed attenuated, deficient in fibrin, precisely as in the instance of purpura hæmorrhagica. On cadaveric inspection the brain presented some scarlet puncta; the chest was fully formed, but there were adhesions of both lungs, and about eight firm solid tubercles, about the size of peas, in a perfectly quiescent state, distributed through the upper part of each lung. There were ulcers in the lower part of the ileum, and in the cæcum. No trace of fat could be found, except about the heart. The medical men arrived at the conclusion, that death had been caused by hæmorrhage.

The jury, while framing their verdict accordingly, could not "refrain from expressing the strongest feelings of disgust and indignation at hearing it proved by the testimony of the nurses that the afflicted gentleman had been cruelly exposed to a system of starvation while in the state of the most extreme debility, during at least ten days previous to his death, he having, during that long time, been allowed nothing but cold water, by the advice of his medical attendant." The Coroner fully concurred in the verdict.

In this course they were fully justi-

fied, inasmuch as the Registrar-General has lately recommended that juries be instructed to announce with greater minuteness than at present the cause of death; "recording more in detail the nature of the injury, and the *circumstances under which it happened*.*"

The above disclosure will, we trust, demonstrate to the public the danger and absurdity of homœopathic quackery. Nothing could have been fairer or more unbiassed than the conduct of the medical men on this occasion. They confined themselves to a bare narrative of facts, without promulgating any opinion. Upon this statement the jury rested their verdict. The expression of censure is a distinct proposition, deduced from the evidence of the nurses, and is thoroughly borne out.

We think that, under proper management, the unfortunate gentleman would have had a reasonable chance of recovery. The amount of organic disease was inconsiderable. There were, it is true, ulcers on the surface of the bowel. But are ulcers in that situation necessarily mortal? by no means. Every practitioner in the habit of frequenting the dead-house must have witnessed examples of cicatrices upon the mucous membrane, denoting the pre-existence of ulceration, where the subject died of some other malady. The presence of a few isolated dormant tubercles in the lungs is of trivial import. Under such circumstances the respiratory function might have gone on unimpaired for a long series of years, taking into account that all the other viscera were sound.

It was assuredly the bounden duty of the medical attendant to have supported the patient's strength by bland nutriment, instead of letting him sink from inanition. In such cases, says Dr. Abercrombie, "much depends upon

diet, and the greatest benefit is often obtained from a regimen restricted entirely to farinaceous articles and milk*."

MEDICAL MISSIONARY SOCIETY OF EDINBURGH.

OUR attention has been called to a very laudable undertaking—the Medical Missionary Society of Edinburgh. The objects of this association are to circulate information on the subject of Medical Missions, to aid other institutions engaged in the same good work, and to render assistance at Missionary stations to as many professional agents as the funds placed at its disposal will permit. All persons contributing not less than five shillings a year are members. Through the united instrumentality of Dr. Parker, of Canton, and the late Dr. Abercrombie, a committee was formed, whence the Society originated. There are at present in connexion with the Medical Missionary Society in China, three medical men, constantly employed in giving their services to all applicants, irrespective of rank, age, or sex; two others are resident in Persia. Dr. Beilby is President, and the Rev. Dr. Chalmers, with Dr. Alison, are Vice-Presidents.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Tuesday, March 11th, 1845.

DR. CHAMBERS, President, in the Chair.

THE Society was crowded to excess this evening, in consequence of the installation of the newly elected President.

Dr. Chambers on taking the Chair, briefly addressed the Meeting. He thanked them most sincerely for the honour they had done him in electing him their President, an honour which he regarded as the greater, inasmuch as he had really done nothing for the Society, he therefore viewed it as the result of personal esteem and regard.

Absence from the Society, however, he could assure them was the result of the pressure of his ordinary occupations, occupations from which no one who had once embarked in them could shrink. The pressure of these occupations had weighed upon a constitution never very robust, and had produced a series of formidable attacks which had precluded him from joining in the trans-

* Sixth Annual Report, p. 25.

* Diseases of the Abdominal Viscera, p. 283.

actions of those literary and professional associations from which he might have experienced both satisfaction and improvement. He requested the indulgence of the Society in any deficiency he might, as their President, exhibit, but assured them that he never could be deficient in his desire to benefit the Society.

On the Pulsating Tumors of Bone, with the account of a case in which a ligature was placed around the common iliac artery. By EDWARD STANLEY, F.R.S. Surgeon to St. Bartholomew's Hospital.

THE author remarks that there are three distinct sources of pulsation in the tumors of bone—1, the proximity of the tumor to a large artery; 2, the development of blood-vessels and blood-cells, constituting a sort of erectile tissue within the tumor; 3, the enlargement of the arteries of the bone in which the tumor has arisen. Proximity to a large artery is the most frequent source of pulsation in these tumors, of which six examples are brought forward. Three occurred at St. Bartholomew's Hospital. In one of them, an encephaloid tumor originating in the humerus, the ligature of the subclavian was recommended, but not assented to by the patient. In another, it was agreed in consultation that sufficient ground existed for believing the tumor to be a popliteal aneurism, and accordingly the femoral artery was tied in the middle of the thigh. The tumor consisted of a compound of soft fibrous and dense osseous tissue, the latter situated deeply and extending around the femur, in which it appeared to have originated. Of the other three cases, two were communicated by Mr. Hodgson, of Birmingham, and the third by Mr. Lawrence. The latter is already recorded in the 17th volume of the Transactions of the Society. There are six examples of pulsating tumors, differing in their nature and originating in different bones, but agreeing in the circumstance that no other source of pulsation was discoverable in them than the contiguity of large arteries. To the same class of cases the author considers that the important one related by Mr. Guthrie belongs, in which a medullary tumor about as large as an adult head, situated upon the right nates of a female, presented so decidedly the characters of aneurism, that it was believed to be so by Sir Astley Cooper and other experienced surgeons who were consulted upon the case, and accordingly a ligature was placed around the common iliac artery.

On the subject of pulsation in the tumors of bone dependent on the development of blood-vessels and blood-cells, forming a sort of erectile tissue within the tumor, Mr. Stanley remarks, that in the case of recent occurrence in St. Bartholomew's Hospital,

there certainly was a structure capable of enlargement by the distension of its vessels and cells; and assuming these to have been continuous with the surrounding arteries, the rush of blood into this structure might give to the whole mass a pulsation resembling that of aneurism. Two cases are related, in which the pulsation of the tumor was ascribed to a similar cause. In one communicated to the author by Mr. John Lawrence, Jun. the tumor, originating in the upper part of the femur, was more of a gelatinous than encephaloid character, and its gelatinous tissue formed more than one half its bulk. The other, which was furnished by Mr. Iuke, of the London Hospital, was a tumor of the lower part of the femur, and, in consequence of suspicion of aneurism, the femoral artery was tied. The limb was subsequently amputated, when the tumor was found to consist of cells of varying size, some of the largest being about an inch in diameter, and they were filled with blood.

Of pulsation in the tumor of bone dependent on the enlargement of the arteries of the osseous tissue, several cases are referred to; one related by Dupuytren, the others by Pelletan.

One circumstance in the history of these different forms of pulsating tumor is especially noticed by the author, as it appears to have a material influence on the production of pulsation in them,—this is, the density and resistance of the immediate investments of the tumor. He adds, that it may be doubted whether any of these tumors would pulsate without the resistance derived in one or other direction from the bone or its coverings. A tumor originating in soft parts, and unconnected with any bone, but situated close to a large artery, and confined within resisting structures, and thus approximating in its conditions to the pulsating tumor of bone, may, like it, pulsate in a manner to be mistaken for aneurism. An example is given of a man admitted into St. Bartholomew's Hospital, under the care of Mr. Earle, with a pulsating tumor below the left clavicle, which presented all the appearances of aneurism, and accordingly a ligature was placed around the subclavian artery. The tumor subsided sufficiently to confirm the opinion entertained of its nature, and the patient was discharged. Six years afterwards he was again admitted with general derangement of the health, from which he sunk. On dissection, the axillary artery presented no indication of having been the seat of aneurism. Immediately behind the artery was a solid tumor, which had originated in the sheath of a large nerve.

After some observations tending to show the little value to be attached to the presence of bellows-sound in the diagnosis between aneurism and the pulsating tumor of bone,

the author proceeds to relate the case of pulsating tumor of the ilium which has recently occurred in St. Bartholomew's Hospital, in which a ligature was placed around the common iliac artery. The patient, a man, aged 42, had on the inner side of the right upper arm, a tumor about the size of a small orange, very loosely connected with the surrounding structures, free from pain, and without pulsation. This tumor was first observed about ten years ago, and during the last three years it had ceased to grow. The pulsating tumor of the pelvis had its chief attachment to the left ilium, and projected from both surfaces of the bone. It reached downwards to Poupart's ligament, and to the extent of about three inches into the abdomen. It felt moderately firm, and a little below the crista, near the anterior superior spine, a small moveable piece of bone was discovered apparently involved in the tumor. Every where within reach of the fingers the tumor pulsated, not with a thrill or vibration, but with the deep heavy beat of aneurism. By the ear resting against the abdominal parietes, a bellows-sound was plainly recognised. After a minute description of the local features and constitutional phenomena of the disease, the author observes, that in deciding on the nature and treatment of the case, the following points were involved—was this pulsating tumor an aneurism? and if so, from what artery had it arisen; or was it one of the pulsating tumors of bone? He then states the arguments which, in consultation, led to a preponderance of opinion in favour of this tumor being an aneurism. In the uncertainty respecting the origin of the supposed aneurism from the external or internal iliac artery, the decision would obviously be that the common iliac should be tied, and the man having decidedly expressed his feeling in favour of submitting to the operation, the author considered it his duty to undertake it. The operation was performed on Monday, the 27th of Jan. The case proceeded favourably to the middle of the second day, when symptoms of peritonitis ensued, and he sunk on the morning of the third day from the operation. On examining the body, the effects of peritonitis were observed in the deeper parts and left side of the abdomen. In the wall of the left ventricle of the heart there was a medullary tumor about the size of a filbert. Medullary matter was found in the bronchial glands, and a few deposits of the same kind in the lungs. A minute description is given of the tumor in the pelvis, which was connected with the ilium, and composed of a spongy tissue with cells and convoluted vessels distributed through it. The tumor in the arm, which had all the marks of an innocent structure, was found, to the surprise of the author,

identical in structure with the tumor in the pelvis.

This paper is concluded by some remarks on the operation of tying the common iliac, or the external iliac near its origin, tending to show that with the least risk of injury to the peritoneum, the readiest mode of reaching these vessels must be by an incision through the posterior part of the abdominal parietes.

Mr. Toynbee briefly referred to a case he had lately dissected of a young man who had died of consumption at the age of 19. The patient had a pulsating tumor of bone differing from Mr. Stanley's cases, inasmuch as it was almost entirely composed of blood-vessels, and contained no cells or other structure. It was situated at the point of ossification of the parietal bones.

Mr. Ferguson regarded the paper of Mr. Stanley with much interest. It shewed the great difficulty which experienced surgeons might encounter in deciding on the true nature of certain kinds of tumors connected with the pelvic region. He had seen several cases similar to those brought under notice by the paper. Two of these cases had been under the care of Mr. Syme, of Edinburgh, and illustrated the diagnosis of these cases, even to experienced and able surgeons. These cases occurred during his (Mr. Ferguson's) connection with the Royal Infirmary, and he had consequently had an opportunity of seeing them. Mr. Syme had published them in his Clinical Reports. In one of these cases there was a swelling in the situation of the external iliac artery, which was considered to be aneurismal; other surgeons, however, were of a different opinion. Mr. Syme, however, acting chiefly on his own responsibility, determined upon placing a ligature high up on the external iliac, or on the common iliac artery, as might seem advisable. On completing the incisions through the abdominal parietes, it was discovered that the tumor was not an aneurism; it was nevertheless removed, and the patient sunk a few days after the operation. It was then discovered that tumors of a similar kind were situated in various parts along the course of the chief arterial vessels; they were smaller in size than that removed, but it was evident they owed any pulsation they possessed to their connection with the arteries. In a second case, in which a tumor was also situated in the course of the external iliac, much difference of opinion existed amongst the most distinguished surgeons of Edinburgh respecting its true nature. Eventually a ligature was placed round the common iliac artery. The patient died, and the tumor was found to be aneurismal. Another case, which had come under the observation of the speaker, resembled in many

points the cases mentioned by Mr. Stanley. The pulsation and the *bruits*, said to be diagnostic of aneurism, were present; he, however, refused to operate. He was led to this determination from having recently become acquainted with Mr. Guthrie's case, to which reference had been made in the paper. After death the tumor was found to be very similar to the cases mentioned in the paper. The tumor was prominent in the pelvis both internally and externally, and the os innominatum was completely destroyed. The tumor was composed chiefly of medullary matter, clots of blood, and spiculæ. Mr. Nicol, of Inverness, about the time of the occurrence of these cases, had treated a tumor connected with the upper part of the shoulder-bones, supposing it to be aneurismal.

The case was similar to one related by Mr. Luke, inasmuch as the tumor had resulted from an injury. A ligature was placed round the subclavian. At first the operation appeared successful, but the patient soon died, and the tumor was found to be malignant.

ADDRESS DELIVERED AT THE ANNIVERSARY MEETING, HELD MARCH 1ST, 1845, BY EDWARD STANLEY, ESQ. F.R.S. PRESIDENT OF THE SOCIETY.

Gentlemen,—It appears to be an expected duty of your President, now almost sanctioned by time, that he should, at this meeting, briefly set forth a history of the Society's progress during the preceding year, and there is an obvious good in this; it becomes the means of informing the Fellows, at stated periods, of the condition of the Society—whether it is generally prosperous or otherwise, whether, in all its arrangements, the Society is working fully and effectively for its objects of advancing and diffusing medical science, and of promoting, as far as it can, the amicable relations of its associates; and if there be departments of the Society admitting of improvement, this annual retrospect affords to the Fellows the opportunity of considering in what directions it can best be made.

Our new associates in the preceding year amount to thirty-two, among whom I notice with peculiar pleasure Professor Thomas D. Müller, the distinguished surgeon of Philadelphia, who, in offering himself to our ballot, and contributing money to our funds, has afforded substantial proof of the estimation in which the Medico-Chirurgical Society is held by our transatlantic brethren.

We have to regret that, during the preceding year, the following names have been removed from our list—Dr. Sutherland, William Annandale, Esq., Dr. Billiug, and Thomas Copeland, Esq.

Our total number of Fellows, exclusive of Honorary Associates, is at this time above

five hundred; and of these we are to remember that many reside in the provinces, and consequently derive no other advantage from the Society than a participation in the good name it bears.

Our library report corresponds with the general prosperity of the Society; we have added to our collection, during the preceding year, 203 works, of which 77 were by presentation, and the remainder by purchase. Our reading-room, now stored with all the British and foreign scientific journals of value, is proved, by its usefulness to the Fellows, to be an important feature in our arrangements.

Our ordinary meetings, it affords me much pleasure to state, have, during the preceding year, been well attended, bringing together from seventy to a hundred of our Fellows, with numerous visitors, many of whom have come from the provinces, and from foreign countries.

Our twenty-seventh volume of papers, equalling its predecessors in bulk, is, I confidently believe, regarded by the profession as not inferior to them in value.

Here I conclude the enumeration of the principal incidents furnishing criteria of the condition of the Society, and pass to another portion of my report, which will be regarded with feelings of a different kind.

We have had the misfortune to lose by death, during the preceding year, the following Associates:—Dr. Dalton, Sir Henry Hallford, Dr. Barlow, of Bath, Dr. Hope, of Edinburgh, Dr. Home, of Edinburgh, Sir Isaac Wilson, of Bath, and Mr. Tupper, of London.

It is well known to be a custom which has been long observed in the scientific societies of the Continent, that, at stated periods, the merits and the virtues of deceased associates should be duly commemorated. And of late years an expectation seems to have arisen in the minds of the Fellows of this Society to receive something of the same kind from their President at these annual meetings. But in assigning such a task to the President, you will, I venture to say, sometimes place him in a difficult and delicate position, for, in the course of events, it will happen that many of our departed Fellows have been most estimable individuals, both in professional and private life, and yet they may not have left behind them such durable monuments of professional skill and knowledge as would constitute a befitting eulogy to be pronounced before the members of a learned Society; with due consideration, therefore, I beg you will receive the few matters of information I have been able to collect respecting the character and conduct of our departed associates in the preceding year.

To inform you what the chemical philo-

sopher has done for the advance of his science requires, for justice to be done to the subject, that it should be treated by a chemist. I have learned just enough of the subject to know that in every country where science is cultivated, the title of philosopher, in its highest and largest sense, is awarded to our departed honorary associate Dalton, in acknowledgment of his labours and discoveries in chemical and physical science, among which stands out foremost his development of the theory of definite proportions—the foundation of modern chemical philosophy.

An instance is here presented to us of the difficulty with which new truths are often appreciated even by minds well prepared to receive them. Dr. Thomson tells us, that shortly after the promulgation of Dalton's views, happening to dine at the Royal Society Club, every member having left the room except Sir Humphry Davy, Dr. Wollaston, and himself, they occupied an hour and a half in conversation about the atomic theory, in order to convince Davy of the inaccuracy of the opinions he had formed of it; but, so far from changing his opinions, he went away, if possible, more prejudiced against it than ever; and that soon afterwards, Davy meeting Mr. Davies Gilbert, amused him with a caricature description of the atomic theory, which he exhibited in so ridiculous a light, that Mr. Gilbert declared he was astonished how any man of sense or science could be taken in with such a tissue of absurdities. But Davy, at no distant period, became so complete a convert to the new views, that we find him the warm eulogist of Dalton, in delivering to him, at the Royal Society, the first of the Royal medals awarded for discoveries, or useful labours in any department of science.

Originality and clearness of thought, ingenuity of explanation, capacity for labour, and power of generalization, were in a remarkable degree united in Dalton. But the beauty of his mind was most conspicuous in the sincerity and earnestness of his devotion to science, independent of worldly considerations; and in the early part of his career, with a very small share of worldly prosperity—for it is known that he resorted to the lowly occupation of teaching others to write as the means of providing his own subsistence, and, at a later period, gave lessons in mathematics and natural philosophy at the charge of eighteenpence an hour. And it was at the time of fulfilling these humble duties that Dalton commenced those investigations which led to the discovery of the laws upon which the whole system of modern chemistry is based. Following him through a later period of his career, we find him displaying the same greatness of character in the little anxiety he manifested lest others

should outstrip him in the race of discovery. It appears that the simple and happy idea from which the atomic theory originated first occurred to the mind of Dalton in the course of his researches on the solubility of different gases in water, which were published in the Transactions of the Manchester Society for 1803. But not until 1808 did he publish his new views in the first volume of his *Chemical Philosophy*, and not until twenty more years had elapsed did he publish the completion of his views in the third volume of the same work, a great part of which had been printed more than ten years.

Dr. Dalton occasionally directed his mind to physiological subjects, and displayed in these the same turn for experimental inquiry, and originality of thought, as in the subjects of chemical and physical science. His papers on physiological subjects were published in the *Memoirs of the Literary and Scientific Society of Manchester*. They are, an account of a peculiarity of vision in his own person, under the title of *Extraordinary Facts relating to the Vision of Colours*; also papers on respiration and animal heat; on the mechanical effects of atmospheric pressure on the animal frame; and on the quantity and chemical elements of food compared with the secretions in a healthy person, founded upon a series of experiments which were chiefly made upon himself. And it especially deserves to be noticed that in the last-mentioned he commenced the line of investigation which has been recently pursued by Professor Liebig, and, I am authorized to add, without his being aware of the previous observations of Dalton on the same subject.

The account of the discovery of the peculiarity of vision in his own person is thus given by Dalton:—"I have often seriously asked a person whether a flower was blue or pink, but was generally considered to be in jest. Notwithstanding this, I was never convinced of a peculiarity in my vision till I accidentally observed the colours of the flower of the geranium zonale by candle-light. The flower was pink, but it appeared to me almost an exact sky-blue by day; in candle-light, however, it was astonishingly changed, not having then any blue tint, but being what I called red. Not then doubting but that the change of colour would be equal to all, I requested some of my friends to observe the phenomenon, when I was surprised to find they all agreed that the colour was not materially different from what it was by daylight, except my brother, who saw it in the same light as myself. This observation clearly proved that my vision was not like that of other persons." * * "Reflecting on these facts," continues Dr. Dalton, "it appears almost beyond a doubt that one of the humours of my eye is a coloured

medium, probably some modification of blue. I suppose," he adds, "it must be the vitreous humour, otherwise I apprehend it might be discovered by inspection of the eye, which has not been done."

After his decease, these interesting observations, and the point which had been left for inquiry, were not forgotten. In obedience to the directions of Dalton, an examination of his eyes was made by Mr. Ransome, and his colleague Mr. Wilson, of the Manchester Infirmary, and with the following account of which Mr. Ransome has very obligingly furnished me.

"On the cornea appeared the usual areus senilis, but its centre was perfectly transparent, and free from any tinge of colour. The aqueous humour, received from a puncture of the cornea into a watch-glass, was viewed by reflected and transmitted light, and found to be perfectly pellucid and free from colour. The vitreous humour, with its hyaloid membrane, was also perfectly colourless. The crystalline lens was amber-coloured, as usual in old persons. A vertical section at right angles to the axis was made in the other eye, without disturbing the position of the crystalline, &c., and through this portion of the eye, laid horizontally, some of the colours were examined which Dalton had been unable to distinguish, particularly red and green, with, Mr. Ransome states, no appreciable difference to his vision. These results were transmitted to Sir David Brewster, who visited Mr. Ransome for the purpose of examining the eyes, and they agreed that the imperfection arose from some deficient sensorial power rather than from any peculiarity in the eye itself.

I read, and I am sure the Fellows of the Society will hear, with pleasure, the conclusion of the communication which Mr. Ransome has been so kind as to favour me.

"As a man, a member of society, apart from his position as a philosopher, the character of Dalton was almost perfect. Simple, warm-hearted, unassuming, temperate, and truthful, he could unbend from his scientific contemplations, and accommodate himself to the circumstances of the moment, particularly in the social circles of his intimate friends, when it could be discovered that the grave philosopher had a fund of sly humour, and aptitude for enjoyment quite unexpected. Though he never sought distinction, and passed two-thirds of his life without due appreciation of the value of his labours, he was not indifferent to the honours which, in his later years, were heaped upon him. His face beamed with modest pleasure when, at the Manchester meeting of the British Association, he received the homage of the assembled philosophers."

Mr. Ransome further informs us that "Manchester never presented such a scene

as on the day of his interment; there was a general suspension of business, and the assembled thousands behaved with the utmost decorum as the long cavalcade passed through them to accompany his remains to their last resting-place. Many, probably a large majority, could not understand the meaning of the ceremony, but they knew it was in honour of a great and good man, and one of humble birth."

So completely have the public journals anticipated me in the details of the professional career of Sir Henry Hallford, that the repetition of these would be a needless occupation of your time. Sufficient, therefore, it will be for me to touch on those constituents of his character which so wonderfully won for him the patronage and confidence of the aristocracy, not of birth alone, but of the higher order, the aristocracy of intellect; for, be it remembered, that Hallford, the confidential medical adviser of three English Sovereigns, was also the physician, and the literary correspondent, of a large proportion of the most distinguished men of his time. It is well known that he established the evening meetings at the College of Physicians, and mainly supported them for several years by the productions of his pen, afterwards published as essays and orations; it is also known that he twice delivered the Harveian Oration, and that in the year preceding his death, he presided in this room at a meeting of the profession, convened for the object of establishing the Sydenham Society. These are so many proofs of Hallford's professional zeal, that, when viewed in conjunction with the ability he displayed in every thing he undertook, they afford some help to an explanation of the reputation he enjoyed. It has been stated that Hallford as much surpassed his eminent cotemporary, Baillie, in the power of promptly ministering to the relief of symptoms, as did Baillie surpass him in anatomical and pathological knowledge, the only sure ground of diagnosis in disease; and, yet, if Hallford was thus remarkably apt in the suggestion of remedies, this must have been no unimportant element in his success. Hallford, at the commencement of his career in London, was appointed physician to the Middlesex Hospital, but within the short period of seven years, he rose so rapidly into practice that to remain in this office was no longer an object of his desire; he resigned it, and, from this time, was so thoroughly engrossed by the engagements of private practice and general society, in which he largely mixed, that he indeed "had no unwelcome leisure to employ in writing books on physic." The fulness and the overflowings of his mind were almost wholly upon his favourite classical and literary subjects; we must not therefore be surprised to find that, as a

trustee to Rugby School, and greatly to his credit, he actively promoted the election of Arnold to the head-mastership, as we are told in the life and correspondence of that eminent individual. If Halford had, as Heberden, and other distinguished physicians, have done, recorded more of observation and commentary on the treatment of disease, his claims upon our gratitude would have been greater; but still he was a benefactor to his profession, contributing largely as he did, by his association with the great and the learned of his time, to maintain for the medical profession that station in general society which does not, in the same degree, belong to it in any other country as it does in our own.

Dr. Barlow was a distinguished physician at Bath, for nearly forty years. One who states, and I believe with truth, that he was long and intimately acquainted with Dr. Barlow, has recorded of him that "he cultivated medical science with zeal and assiduity; that his exertions were not limited to objects connected with his profession; that he was the zealous and eloquent advocate of every project that was calculated to extend knowledge, promote humanity, or in any way to be useful to his fellow-creatures; that his benevolent feelings led him to support with his pen, his purse, and his personal exertions, every object of public charity and utility." Such an amount of worth in a departed Associate deserves honourable mention from the chair of this Society.

Dr. Thomas Hope commenced his public career as the Professor of Chemistry in the University of Glasgow, then he became Professor of Medicine in the same University, and was afterwards transferred to the chair of chemistry in the University of Edinburgh, which he occupied for nearly half a century. He enjoyed the highest reputation as a lecturer; his theatre was for many years crowded with pupils attracted by the eloquence of his discourses, by the completeness with which he taught the science of chemistry, but especially by the remarkable neatness and success of his experimental illustrations; but it does not appear that he made any discoveries in his favourite science. His only publication I believe to have been, "An Account of a Mineral from Strontian, and of a peculiar species of earth which it contains," read before the Royal Society, in the year 1793, and recorded in their Transactions.

Dr. James Home occupied a Professorship in the University of Edinburgh upwards of forty years, first in the Chair of Materia Medica, then, from the decease of Dr. Gregory in 1821, in the Chair of the Practice of Medicine.

I have not discovered the record of any observations by Dr. Home on the sciences

which he was for so long a period engaged in teaching, yet the notice of him by his contemporaries is in the highest degree respectful, for it is said of him that he was a most zealous teacher, that no Professor in the University took more pains in the preparation of his lectures, and it is added, that in private life he was held in much esteem.

With Mr. Tupper I had not the pleasure of a personal acquaintance, but I know that he was much respected for the soundness of his practical knowledge, that the uprightness of his conduct, simplicity of his manners, and amiability of his feelings, gained for him the warm attachment of a large circle of friends.

Before I quit this chair, one more pleasing duty remains for me—to acknowledge with unfeigned sincerity the unvaried courteousness and indulgent consideration which I have received from the Fellows of the Society through the period of my Presidency; to acknowledge besides, the kind and willing assistance rendered to me in the discharge of its duties by the members of the Council, and especially by my friends, the Secretaries. In perfect truth, I can state that the recollection of the occupancy of the Chair of the President of the Royal Medical and Chirurgical Society will ever be associated in my mind with the feeling, that, whilst it has been the most dignified period, it has been, at the same time, one of the happiest portions of my professional life. My gratitude for the honour and the kindness which I have here received, will, I trust, be manifested by cordially uniting with you, gentlemen, in the support of our Society, which I firmly believe to be inseparably associated with the respectability and the scientific character of our profession.

EARLY APPLICATION OF THE CHILD TO THE BREAST.

To the Editor of the Medical Gazette.

SIR,

IN your number for 28th February last, I find the following extract from a recently published work of Dr. Marshall Hall, on the propriety of an early application of the child to the breast:—

"I do not pretend, in the above proposition, to have advanced anything new; but, in proposing such promptitude, perseverance, steadiness, and decision of purpose, with which I recommend the measure to be adopted, if these be fully apprehended, I BELIEVE I DO PROPOSE SOMETHING NEW."

Permit me to say, that these observations are not entirely new; in proof of which, I

beg to refer to a short paper of mine in the *Lancet*, of 18th May last, where I recommend the child to be applied to the breast immediately after it is dressed, and in much stronger language and more fully than is done by the Dr. in his observations on this branch of his subject.—I am, sir,

Your obedient servant,

JOHN PATERSON, M.R.C.S.L.

Aberdeen Place, St. Nicholas St.,
15th March, 1845.

ASSOCIATION OF GENERAL PRACTITIONERS.

To the Editor of the Medical Gazette.

SIR,

IN your comments upon the Association of General Practitioners recently formed, and in the arguments adduced by you against it, there is one which has hitherto been put forward less forcibly and prominently than its importance deserves; and it is one which I think would have great weight with many of the members of that Association, if it were more seriously dwelt upon. Of the large number of the medical practitioners who have joined it, probably by far the majority are members of the Royal College of Surgeons of London; and it is to these alone that my remarks can apply. At the time of our admission as members of the College, we all take one oath, "to observe the by-laws; to obey every lawful summons issued by order of the Council, having no reasonable excuse to the contrary; and to the utmost of our power to maintain the dignity and welfare of the College." Now, there can be no question that the chief portion of those who have enrolled their names in the new Association have entirely forgotten having taken such an oath, or, if they remember having taken an oath at all, they have forgotten its nature and contents. In fact, it is generally considered so much a matter of mere form, that members on their admission take the oath, receive the diploma, pay twenty guineas to the College, and, perhaps, give something to the porter, without thinking that one of these acts is of any more importance than another. But, whether we think of it or not, we are certainly bound by that most solemn engagement not to do anything which is prejudicial to the College, as long as we remain members; and, if we should, through forgetfulness, or, intentionally, do any thing injurious to it, we are unquestionably breaking our oath, whatever degree of moral blame we may, in our own minds, attach to so doing. It is probable that the recent acts of the Council have been the cause of so large a number of members having joined the Association; as they have thought, and with justice, that those acts

have been regardless of the wishes, and injurious to the interests, of the members generally. But it must be observed, that we are not bound by any engagement to the Council; it is to the College that we have sworn attachment: and the College, certainly, consist of the whole body of the members, the Council being only the executive body for the time being. If, therefore, the members think themselves injured by the Council, they are perfectly at liberty to use any means within their power to alter its constitution, or to induce a different course of conduct; and this they may do by memorializing Her Majesty's Secretary of State, Sir James Graham, to include the College in his bill for granting new charters to certain Colleges of Physicians and Surgeons, and to make due provision in any new charter for the proper recognition of the rights and wishes of the members generally. Many of those who have joined the Association have done so merely with a view of frightening the Council into a different course of action; and, if this object were effected, they would have no wish to become members of a new corporation, but would withdraw their names, thinking that all had been accomplished which they desired. Now, Sir James Graham has expressed himself very strongly against doing anything which should be injurious to the College: although he has given a favourable answer to the representation from the new Association, there can be little doubt that if he saw sufficient grounds for obtaining a charter from Her Majesty to form a new body, he would consider them more than sufficient for desiring one which should have the effect of merely changing in some respects that body in favour of which he feels so strongly. If the charter for the General Practitioners should be obtained, it will have the effect of seriously injuring the College, by causing many, if not most of those who would hereafter have become members of the College, to become members of the new body; at least, this is the expectation of those who have acted in the matter. Now, whether the charter is obtained or not, or whether, if obtained, it would have the above effect or not, has no effect upon the present consideration. All those who have joined the Association, have, in a moral point of view, injured the College already, just as much as if the above effect had actually been produced: for they have done so as far as their actions are able to accomplish it: and whether the anticipated consequences of those actions do or do not follow, they are morally responsible for whatever may happen. There is, however, one way, and only one, by which they can escape the violation of their oath, if they continue their names upon the roll of the new Association, and that is, by resigning their membership in the

College. As soon as they do this they are relieved from all engagements into which they entered, and which are expressed in the oath as being binding only "whilst a member of the Royal College;" and, in the bye-laws of the College, there is a provision, by which a surgeon may resign his membership. But here we are met by the difficulty, that, on doing so, he must pay a fee of ten guineas, besides the stamps, &c. Now the only answer to this is, that we all knew, or might have known, of this law, before becoming members, and, therefore, in doing this, we acted with the knowledge of the consequences which it involved. It appears, then, that the members of the College, who are also members of the Association of General Practitioners, are placed in the unfortunate position, that they are morally breaking their engagement to maintain the welfare of the College, and that there is no way in which they can escape from this difficulty but by ceasing to be members of one or the other; and whatever may be our grounds of complaint against the Council, these do not relieve us from our obligations to the College; nor can anything but a formal resignation, according to the bye-laws, to which we are all sworn, release us from these obligations. The question is one of far higher importance, than merely whether a man shall sign himself M.R.C.S. or M.A.G.P. It is a question which involves the consideration of the nature and obligations of an oath, and one which imperatively demands a more thoughtful and practical consideration than has in many instances been bestowed upon it.—I am, sir,

Your obedient servant,

M.R.C.S.

Liverpool, March 15, 1845.

REGISTRATION UNDER SIR JAMES GRAHAM'S NEW MEDICAL BILL.

To the Editor of the Medical Gazette.

SIR,

MAY I hope that you will give early publicity, in the pages of your journal, to the following letter, which I addressed to Sir James Graham, on the above subject, and also to the answer which I received to it.

I am, sir,

Your obedient servant,

CHARLES CRADDOCK.

March 18, 1845.

*To the Right Hon. Sir James Graham,
Bart. Secretary of State for the Home
Department.*

SIR,—As considerable doubt exists in the minds of medical men as to the interpretation of clauses 13 and 32 of the "Bill for

Regulating the Practice of Physic and Surgery," I should esteem it a favour if you would oblige me with answers to the following questions:—

1st, Would Members of the College of Surgeons, who hold also the license of the Apothecaries' Company, be allowed to register as Surgeons and also as Licentiates in Medicine; and if so, would the double fee be required for such registration?

2dly, Would individuals who hold the diploma of the College of Surgeons only, and who have passed no examination whatever in medicine, be entitled to register as Licentiates in Medicine and Surgery, and to recover for attendance on medical as well as on surgical cases; and, on the other hand, would individuals who hold only the license from the Apothecaries' Society (and there are very many such practising as general practitioners) be entitled to register as Licentiates in Medicine and Surgery, and to recover for attendance on surgical as well as medical cases?

As meetings of the profession are about to take place, I think it very desirable that your opinion on these points should be ascertained.

I have the honour to remain, sir,

Your obedient humble servant,

CHARLES CRADDOCK.

March 10, 1845.

Whitehall, March 17, 1845.

SIR,—I am directed by Secretary Sir James Graham to acknowledge the receipt of your letter of the 10th inst., upon the subject of the Medical Practice Regulation Bill, and to acquaint you, in answer to the first query in your letter, that the bill does not contemplate double registration, nor would anything be gained by it.

Members of the College of Surgeons will be entitled to register as surgeons, and being so registered, may practise as general practitioners if they please.

With respect to your second query,—It is believed the number of those who have passed the Surgeons' College only, and yet practise generally, is not very great. They will be entitled to register as surgeons, and to practise generally under the Bill.

Those who have the Apothecaries' license only, will be entitled to register as licentiates, and to practise generally in surgery as well as medicine.

There is some inconvenience in this course, but not so great as would follow the opposite course.

Hereafter the Bill makes provision for complete examination in both medicine and surgery.—I am, sir,

Your obedient servant,

S. M. PHILLIPS.

To Charles Craddock, Esq.

6, Chapel Place, Cavendish Square.

TWO CASES OF LUXATION OF THE ILIAC BONE UPON THE SACRUM.

THE editor of *L'Expérience* records, in the number of that journal for 28th September, 1843, two cases of this very rare form of luxation, for which he is indebted to MM. Tavignot and Peste, internes in the service of M. Lenoir, at the hospital Necker. He prefaces them with the remark, that, in the opinion of Boyer, "instances of simple luxation of the bones of the pelvis, from external causes, are so extraordinary that it would be very difficult to believe in them, had they not been observed by men whose honesty and exactness were well known." Both of these cases presented themselves in the hospital at the same time, although one of them is not, strictly speaking, an example of simple luxation, the luxation of the iliac bone being evidently complicated with fracture of the ischium and pubes.

CASE I., reported by M. Tavignot.—On the 1st of August, a man named Bonhomme, aged 32, a blacksmith by trade, entered the surgical wards of M. Lenoir. He stated, that on the evening previous to his admission, having just entered his house, he went towards a window without any guards, tripped, and fell from the third story to the pavement below. He could give no account of the manner in which he fell, having lost his consciousness until the following morning. His condition, when examined upon entry, was as follows. A vast extravasation of blood occupied the whole upper part of the right thigh, and appeared to extend to the corresponding abdominal parietes. He could not move the lower extremity, which was, at first sight, shorter than that of the opposite side; the point of the foot was turned slightly outwards. His urine was passed with difficulty, and was drawn off for two days. He was bled twice, twenty leeches were applied to the thigh, and he was laid upon his back. No accident occurred; the tumefaction, extravasation of blood, and pain, disappeared, so that the patient, who, at the beginning, could, but with very great difficulty, move himself in his bed, got up on the 15th September, and was even able to walk a little with crutches. What was his affection? The following statement will show. The length of the limbs, measured from the spine of the ilium to the external malleolus, on both sides, is exactly the same, and yet the right limb looked shorter than the left, at least two centimeters. The foot is not turned either inwards or outwards. The right anterior superior spine of the ilium corresponds with a horizontal line drawn through the umbilicus, while the left is situated five centimeters below it.

The fold of the right groin is somewhat higher than that of the left. Upon feeling carefully and comparatively the horizontal portion of the two pubes, it is easily perceived that on the right side, and starting from the symphysis pubis, the os pubis is somewhat higher than on the opposite side; at the same time, a hard resisting body, with an uniform surface, which appears to be situated in the iliac fossa, may be felt from the iliac spine to the spine of the pubes. This surface is nothing else, as is evident, than the horizontal portion of the pubes, which has been elevated about three or four centimeters. Examination per rectum enables us to ascertain that the tuberosity of the right ischium is sensibly nearer the median line, at the same time that it is elevated. The right branch of the pubes appears, also, to have mounted at the symphysis upon that of the opposite side, so that it is, in respect to the finger, upon a plane anterior to that of the left side. Behind, we remark that the fold of the buttock is situated four or five centimeters above that of the opposite side; the tuberosity of the right ischium has mounted at least four or five centimeters upon the median line; the sacrum has its normal configuration, but upon its right edge a very sensible depression is observed at the level of its junction with the ilium; the right buttock, instead of the prominence presented by that of the opposite side, offers a very marked depression. Pressure on this spot is very painful, though there is but slight oedema. The two iliac crests are far from being on the same level. A horizontal line passing from the right one passes five centimeters above the left. It should be noticed that the posterior spine of the ilium, and particularly the crest of the right side, are, as it were, thrown backwards, that is to say, they are situated upon a plane posterior to that of the same parts on the opposite side. The vertebral column appears untouched. There are, at present, no longer any traces of sanguineous extravasation, and every thing leads to the hope that gradually the motions necessary for progression will be re-established, if not entirely, in consequence of the inevitable limping which will remain, at least in a manner sufficient to allow the patient to return to his ordinary occupations.

CASE II. reported by M. Peste.—Chavanne, a ragman, aged 39, was brought to the Necker Hospital on the 28th July, having just fallen from the top of a staircase. He had spit blood; several fractures of the ribs were ascertained, both bones of the forearm were broken, and, besides, a severe contusion of the right hip was observed. The pain was excessive, the swelling considerable, the sanguine effusion very great; no movement of the patient could be made

without causing him to utter loud cries, and to resist any effort at examination. A slight apparent shortening of the limb gave rise, at first, to a fear of fracture of the neck of the femur. M. P. seized the leg, and raising it, easily moved the limb, although the patient, suffering severely, contracted quite violently his muscles; the great trochanter followed all the movements of rotation of the femur; no sign of crepitus, no deviation outwards was observed. The absence of these signs caused M. P. to abandon his first idea, and to believe he had to do with a contusion of the hip, complicated with a great extravasation of blood.

Next day, M. Lenoir observed again all these lesions; but the swelling and pain prevented a thorough examination of the state of the hip. The patient had, besides, expectorated pus, and suffered extreme difficulty of respiration, to which symptoms attention was chiefly directed. Under the influence of bleedings, the expectoration of pus ceased; the fractures were united; the swelling of the hip, with the effusion of the blood, disappeared; but the pain continued, and movements were impossible. A new examination at this time resulted as follows:—

The patient was placed upon his back; there was then felt, at the level of the spine of the right pubes, a pretty deep depression, above which, on depressing the abdominal parietes, a pointed, moveable, bony tumor, could be felt, which appeared to be formed by the horizontal branch of the pubes, which was fractured and elevated: the anterior superior iliac spine was carried more backward and higher than that of the opposite side. A sound passed, without obstacle, through the urethra into the bladder, and the patient experienced no retention of urine. By examination per rectum, behind and on the right side, irregularities could be observed, which could only arise from fracture of the ischium; above, and also on the right side, by strongly depressing the anterior portion of the rectum, another tumor could be felt, which appeared to be occasioned by a fracture of the pubes: nothing similar on the opposite side. The patient had remained, from the day of his fall, eleven days, without a stool.

Upon placing the patient upon his belly, the right buttock was observed to be flattened, soft, depressed; the fold of the buttock had risen about two centimetres, and described a straight line, directed obliquely from above downwards, and from without inwards; that of the left side was horizontal, and described a curved line, with its concavity upwards. The posterior superior iliac spine was about three centimetres higher than that of the opposite side, as were also the crests of the ilium and the ischium.

Upon pressing at the level of the left iliac spine, the prominence it forms, and, lower down, the projection of the sacro-spinal ligament, were observable; while, at the same points, on the opposite side, a pretty deep impression was found, in consequence of the elevation of the iliac spine, and the rupture of the right sacro-spinal ligament.

An examination of the inferior extremities showed that that of the right side was shortened, the right malleolus externus being about three centimetres more elevated than the left; but if the measure was taken from the anterior superior iliac spine to the respective external malleoli, the distance was equal on both sides, as it ought to be, since the relations of the coxal bones had changed with the vertebral column alone. All these signs became more evident on placing the patient upon his knees, while bending his body forward.

He was kept in an immoveable position. Several days previous to the 15th September, the day on which the case was reported, he had begun to walk with crutches; he bears upon the leg, but gently, it being as yet unable to sustain the weight of the body; he limps, throwing his body strongly over to the sound side; all pain has disappeared. This patient will be cured with a shortening of the right leg. Here, as is evident, the luxation is not simple, being complicated with fractures of the pubes and ischium, which must necessarily occur to enable the coxal bone to experience a general movement upwards, unless separation of the symphysis pubis had occurred. When this separation exists, the symptom noted by Hippocrates, retention of urine, is observed; in this case it was absent, and, indeed, the fracture had left untouched the ligaments which go to the bladder, but there was retention of faecal matter, which should, perhaps, be attributed to the fracture.

The editor of *L'Expérience* observes, in a note, that these luxations occurred in consequence of very great violence, not in scrofulous patients, easily affected by such a cause, but in strong healthy men, in whom there was no reason to suppose a previous relaxation of the ligaments of the pelvis. The diagnosis of the luxation presented no obscurity, being easily deduced from the elevation of the iliac crest and of the fold of the buttock, the depression of that part, the general shortening of the limb, without alteration of the relations, or of the length, of any of its parts, &c. The prognosis of this affection has been considered as very grave by authors, Boyer remarking that, without considering the immediate effects of the external violence, it is constantly followed by an inflammation, of which the consequences may be very serious, as well on account of the extent of the articular surfaces affected,

as because it may extend to the peritoneum and the viscera of the pelvis and lower part of the abdomen, or may terminate by a supuration of the articular surfaces, or of the cellular tissue of the pelvis. None of these consequences were, in these cases, observed, and were indicated by him probably rather *à priori*, than from the observation of cases. This surgeon himself cites a case which resembles entirely, in this respect, those which precede.

"The most interesting case known," says he, "of luxation of the hip bones, exempt from these formidable consequences, was observed by Enaux, Hoin, and our colleague, Professor Chaussier, and inserted in the collection of the Memoirs of the Academy of Sciences of Dijon. The left os innominatum had been displaced and carried upwards. The inflammatory condition did not allow reduction to be made. After some days, during which relaxing applications and an antiphlogistic regimen were adopted, the replacing of the bones was attempted, but prevented by the return of the pains and inflammatory symptoms. Some days later a new and still ineffectual attempt was made, and was then entirely abandoned. Finally, after prolonged repose, but less so than could have been desired, the patient quitted his bed; and having begun to walk, aided by crutches, the weight of his limb brought about part of the reduction, which had previously been vainly attempted. The cure was perfected, and the patient was able to resume his occupation of tiler. This fact proves conclusively," adds Boyer, "that, in cases of this nature, the most important consideration should not be to seek to cause the reduction, but to combat, by every possible means, the inflammation and its consequences. Too fortunate to obtain the cure at the expense of whatever possible deformity."

M. Lenoir followed the advice of Boyer; he abstained from any effort at reduction, and, besides, how could you reduce, or, at any rate, how could you maintain, in a state of reduction, a luxation of this kind?*

RECEIVED FOR REVIEW.

Contributions to Pathology. By D. R. Leitch, M.D. &c. 8vo. pp. 14, (from the Northern Journal of Medicine, for November, 1844.)

Christian Faith not Inconsistent with the Pursuits of Science: a Sermon preached at the Consecration of the Queen's College Chapel, Birmingham. By Henry, Lord Bishop of Worcester.

Third Annual Report of the Edinburgh Medical Missionary Society.

* American Journal of the Medical Sciences. Jan. 1845.

APOTHECARIES' HALL.

Gentlemen who have obtained Certificates, March 13.—George Cotton, Northampton.—Frederick Henry Johnson, Sunderland, Durham.—John Cross, St. Helen's, Lancashire.

MORTALITY OF THE METROPOLIS.

Deaths from all causes registered in the week ending Saturday, March 8.

ALL CAUSES.....1141
SPECIFIED CAUSES.....1141

I.—Zymotic (Epidemic, Endemic, and Contagious) Diseases, 178; among which, of—

Small Pox	25
Measles	17
Scarlatina	24
Whooping Cough	42
Croup	9
Thrush	1
Diarrhœa	10
Dysentery	1
Cholera	0
Influenza	3
Typhus	35

II.—Dropsy, Cancer, and other Diseases of uncertain or variable Seat, 120; among which, of—

Inflammation	0
Dropsy	30
Scrofula	4
Cancer	14
Atrophy	19
Debility	20
Sudden Deaths	22

III.—Diseases of the Brain, Spinal Marrow, Nerves, and Senses, 179; among which, of—

Hydrocephalus	45
Apoplexy	27
Paralysis	18
Convulsions	58
Insanity	1
Delirium Tremens	1

IV.—Diseases of the Lungs, and of the other Organs of Respiration, 406; among which, of

Pneumonia	108
Hydrothorax	7
Asthma	38
Phthisis or Consumption	166
Diseases of the Lungs, &c....	17

V.—Diseases of Heart and Blood-vessels 36

VI.—Diseases of the Stomach, Liver, and other Organs of Digestion, 62; among which, of—

Teething	11
Gastritis	2
Enteritis	9
Tubercles	5
Hernia	3
Disease of Stomach, &c....	5
Disease of Liver, &c.	11

VII.—Diseases of the Kidneys, &c. 13

VIII.—Childbirth, Diseases of the Uterus, &c. 24; among which, of—

Childbirth	17
Disease of Uterus	7

IX.—Rheumatism, Diseases of the Bones, Joints, &c. 9

X.—Diseases of Skin, Cellular Tissue, &c. 1

XI.—Old Age..... 72

XII.—Violence, Privation, Cold, and Intemperance..... 41

WILSON & OOLIVY, 57, Skinner Street, London.

THE LONDON MEDICAL GAZETTE,

BEING A
WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

FRIDAY, MARCH 23, 1845.

LECTURES ON THE NATURE AND TREATMENT OF DEFORMITIES,

*Delivered at the Royal Orthopædic Hospital,
Bloomsbury Square,*

By R. W. TAMPLIN, F.R.C.S.E.

Surgeon to the Institution.

Rachitis: True—Congenital—Non-congenital—False—Non-congenital—Treatment.

I SHALL now, gentlemen, proceed to the consideration of rachitic curvatures of the bones, of which so large a proportion of cases present themselves at this charity. By the term Rachitis is understood a softened condition of the bones of the extremities, or of the bones generally; and almost all the authors who have written on this subject include under this head curvature of the bones, whether arising from disease which affects the general health and constitution of the patient, whereby the bones are not only softened, but also altered in size and form, the disease influencing the growth and development of the bones, and those cases, of which so many are to be seen, of simple curvature of one or more of the bones of the lower extremities, which exists without any other alteration in their relative or normal proportion; the one being totally different in cause and effect from the other. I would therefore confine the term rachitis to that condition in which there is evidence of disease affecting the bones and body generally; and *false* or *spurious* rachitis, to that condition in which a simple curvature exists without any other change or alteration.

By "rachitis," then, you will understand that diseased and softened condition of the osseous system generally, which has for its results not only a curvature of one or more bones, but an actual change in their relative

proportions; this change being a diminution in length, with an hypertrophy in size. It is both congenital and non-congenital. Cases are mentioned by Hippocrates of congenital rachitis, and also by others, so that it has been known and recognised from the earliest history of surgery. I have been fortunate enough to meet with a specimen in a seven months' fetus, of which this is the skeleton; and you will observe that the long bones of both the upper and lower extremities are about twice their natural thickness, and about a third, or perhaps more nearly one-half, shorter than natural; that the tibia and fibula of both legs are curved severely, the fibula outwards, the tibia inwards; that the radius and ulna of both upper extremities are also curved outwards and inwards; that the ilii and scapulae are enormously hypertrophied, and the head, as is usual, very nearly twice the natural size; the parietal suture ankylosed at its middle third, and talipes varus of both feet (vide fig. 1.) The extremities of all the long bones greatly enlarged, having more the appearance presented in the skeleton of the elephant. There does not appear to be a deficiency of earthy matter, but there evidently is a want of cohesion between the earthy particles, as if the cellular tissue itself did not possess the power of retaining in apposition, that is, the natural close apposition which is common to the healthy bone. In this instance the parietal bones, as stated, were partly ankylosed. In this subject tubercular matter was freely deposited in the liver and other organs, and also on the inner side of the sternum, as may be here seen. [The preparation was here shewn, together with the liver.] I have not been able to trace the history of the parents, which renders it somewhat incomplete, although no doubt exists in my mind of its being hereditary.

In this affection, then, you will have, combined with curvature of the bones, a generally diminished stature, and very frequently the evidence of tubercular disease,

FIG. 1.

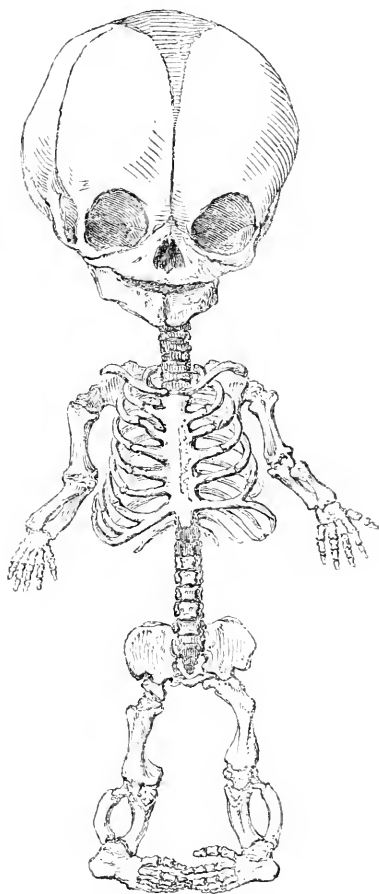


Illustration of congenital rickets, combined with talipes varus of both feet.

with which it appears to be, as far as my observation goes, almost invariably connected; for in those instances that have presented themselves at this Charity, that peculiar diathesis common to tubercular disease has been most apparent. In this case, taken from a patient 18 years of age [exhibiting it], who was afflicted with severe knock-knees, with curvature of the bones of both the upper and lower extremities, and flattening of the ribs, the only organ that appeared at all approaching the natural size, was the organ of generation, which appears in these cases to retain its full vigour; for I believe that consumptive patients are not deficient in the power of reproduction. In these cases the softened condition of the

bones is confined to children under 5 years of age, for after that period, although the bones never possess their normal proportions, yet they become as hard as the healthy bone, and in some instances are stated to be actually stronger; as, if the curvature is not removed in childhood, a deposit of bony matter takes place at the weakest point, namely, the concavity of the curve, which renders them capable of bearing great weight; and if the individual has been subjected to much muscular exertion, and possessed good health, they are enabled to undergo quite as much, occasionally greater, bodily exertion, than an individual who has not thus suffered. This, however, is the exception, for unfortunately many fall vic-

tims to the diseases of childhood and puberty.

In cases which have not been noticed during the first months of existence, but in whom the bones become curved afterwards, you will find the curvature generally forwards, or forwards and outwards, of the tibia and fibula; forwards and inwards, and with which is invariably connected knock-knees more or less severe, with the most

severe form of talipes valgus, arising partly from the curvature of the bones, and also from the general debility from which the patient suffers (vide fig. 2); outwards of the femur; outwards and inwards of the radius and ulna, occasionally so acute, that you will with difficulty reconcile the possibility of its being a simple yielding of the bones, but will at first sight regard it as a badly-united fracture. Flattening of the ribs, with the

FIG. 2.



Diagram taken from the Cast of a child, aged 10 years, in whom every bone appeared more or less curved, with a generally diminished development attributed by its parent to the effects of dentition.

prominent and projecting sternum; occasionally the cartilages of one side of the sternum projecting much beyond that of the opposite side, the patient having what is termed the "pigeon breast." Not unfrequently, also, lateral curvature of the spine, from the same cause, and of which I shall speak when I come to that subject. The

general health impaired, indicated by the pallid aspect, emaciated and flabby condition of the body generally; morbid appetite; irregular bowels; enlarged tumid abdomen, symptomatic of the existence of mesenteric disease,—in fact, a concentration of ills scarcely to be met with in any other disease.

This affection is unquestionably, as I have said, constitutional, but is aggravated, and frequently brought into activity, by dentition; the febrile diseases to which children are subjected, worms, and with bad insufficient diet, deficiency of clothing, &c. &c. They become, in fact, from these causes, as well as from the predisposition to disease, liable from any slight casualty to suffer locally or generally, and are the frequent subjects of strumous disease of the joints, and what is termed "Pott's disease," with angular curvature of the spine.

I regard, then, common curvature of the bones of the lower extremities, without that general rachitic condition of which we have just now spoken, as totally different both in its cause and effects, and have therefore ventured to designate it by the term of spurious or false rachitis, and am of opinion that it may exist without any evidence of ill health, although the irritation consequent on dentition, as well as any of the causes mentioned, which so frequently interfere with the health of a child, certainly predispose them to a softened condition of the bones, but which ceases as soon as the health is restored; and unless the curvature is relieved during the time they are thus preternaturally soft, they become hardened in the curved position, and are rarely remediable.

Muscular action is unquestionably one of the direct causes of curvature, both in this and in the former instance, as the bones are the fulcrum upon which the muscles act; and before, as well as during the action of the muscles, the bones of necessity receive the weight or pressure occasioned by their contractions. In some instances of enormously fat children, the weight of the body appears to be the principal cause, as the upper extremities escape altogether, and the general health of the child does not suffer; and many cases are said by their parents never to have suffered.

The curvature in these cases is generally outwards of the tibia and fibula, commencing just above, or at the epiphyses of the lower extremity of the tibia, and will be found to exist more or less acute, frequently altering the position of the articular surfaces of the head of the fibula, which, carrying with it the condyles of the femur, produces what are termed bow-legs—the legs presenting, from immediately above the ankle-joint, one uniform curve, as I pointed out to you when speaking of the deformities of the knee-joint. It is rare to find the femur curved in these cases; it is most common in true rachitis. You will find also a relaxed condition of the internal lateral ligaments of the ankle, and talipes valgus as a consequence, but more severe in the former instance. The muscles are generally well developed notwithstanding the curvature, which, in the

former instance, is rarely if ever to be met with. In fact, most cases of this kind present a healthy appearance, are of the natural size, and the bones of their proper relative proportions. These latter I regard as "non-congenital," and also, that they are not to be considered as indicative of general or constitutional debility beyond the immediate condition; whereas the former are certainly subjected to general as well as temporary causes. A great deal has been written and said of the enlargement noticed at the extremity of the radius in these cases, some supposing that an actual enlargement has taken place, others that it exists only in the imagination, and that it appears enlarged from the diminished muscular development. In true rachitis there is most certainly an enlarged or hypertrophied condition; in false, I do not believe it exists either in the radius or in any other bone. In the skeleton of the fetus you have had an opportunity of examining, (vide fig. 1) this enlargement of the extremities of the long bones is most evident. The head has been said to be enlarged; the same remarks apply here also, for certainly, in the cases last mentioned, there is no trace of increased size. The pelvis, in true rachitis, does not become developed with the growth of the individual; in false, always in common with the osseous system generally; and I would refer you to a most interesting paper by the late Mr. John Shaw, in the seventeenth volume of the *Medico-Chirurgical Transactions*, in which tables are drawn up, shewing the actual measurement in these cases; so that there are many and most important differences between what I imagine to be two very different conditions, and which will guide you in forming your prognosis, as well as in the treatment, which we come now to consider.

The treatment consists of general and mechanical means. In the severe forms commonly met with of true rachitis, of course your attention must be directed to the general health of the patient; and every means must be used which will have a tendency to alter and improve their condition. The secretions are invariably unhealthy; and the alterative I have found most beneficial has been the Hydrarg. c. Cretâ, in small doses, given regularly every or every other night, not to act as an active aperient, but rather to gently relieve the bowels; and the tonic, the tincture of the sesquichloride of iron, in the form stated when speaking of knock knees. If the bowels are in an irritable state, which is frequently the case in these patients, I have given them with advantage the extract of cinchona, combined with the aromatic confection, and the Hyd. c. Cretâ at night. However, it is immaterial what tonic is used, so long as the object

is gained; and, of course, each individual would adopt that which he believes to be the most beneficial. The diet should consist of a nourishing not stimulating kind. These patients do not bear stimulants, save only in the mildest forms: milk, eggs, meat, bread, and potatoes as a vegetable, I imagine to be the most useful. Unfortunately the great proportion of cases occur amongst the poor, whose means do not, or whose mode of life will not admit of their procuring proper nourishment. Without this, however, it would be useless to treat them, as it is the sheet anchor: change of air and diet is of the utmost importance. The sea side is generally recommended. It is, however, of very little moment, although I prefer the country, where a child can run about without restraint, and without the necessity of being directed in its movements. There is nothing so conducive to health as the free exercise of the limbs of children subject to this disease, in the open air; and there is no place where this can be obtained so well as the country cottage or farm-house. It certainly is of far more importance than all the physic that can be given, and in many instances saves both the life and health of the patient, as well as prevents or puts a stop to the increase of deformity.

As regards the mechanical treatment, your efforts must be directed so to apply your pressure and counter-pressure that the patient shall be in no way inconvenienced; that, at the same time the curvature is being removed, such support shall be given them as will enable them to take exercise with greater facility and comfort than they could otherwise have done, as by so doing a great assistance is given to the improvement of the general health. If, then, the curvature of the tibia is forwards, I would advise your using a straight splint behind the leg, well padded at each extremity, and having a hole cut at the point corresponding with the heel. Let the splint be secured with strapping, or common webbing straps and buckles; and let your pressure be regulated also by means of a webbing strap, first protecting the spine of the tibia with a pad, having a hole cut in it to prevent pressure being made directly upon it. The pressure can be thus increased by the smallest degrees, and with ordinary care will occasion no pain or inconvenience. In curvature of the tibia and knees outwards, adopt the same means, applying the splint on the inside of the leg; and let the strap, with which the pressure is kept up, be applied over the point at which there is the greatest amount of curvature. In cases of curvature of the femur outwards, very little can be done, as there is no means I am acquainted with which will admit of constant and uninterrupted pressure being made. If, as is commonly the case in true

rachitis, you have the femur curved outwards, the tibia outwards, and inward inclination of both knees, I would advise your first removing the deformity of the knee-joints with the straight splint mentioned in the lecture on that subject, and afterwards applying splints on the inside of the tibia.

In all cases that present themselves in the incipient state, when the bones are still soft, by these means the deformity may be quickly and easily removed; but when the bones are becoming consolidated and hardened, the treatment of necessity becomes exceedingly slow, and will require a long and uninterrupted perseverance. The splints must be worn night and day, and removed only once or twice a week, for the purpose of cleanliness. Irons have been used from time immemorial; I object to them because it is impossible to sustain so steady a pressure, or to increase it with the nicety that the common webbing strap enables us to do, without which there is no prospect of removing the deformity. In severe cases of anterior curvature, the section of the tendo Achillis has been recommended. I do not myself see that any advantage is or can be gained by this proceeding, as in no instance can you proceed with rapidity; and before the curvature in the bone can be much relieved, the tendon becomes as strong as ever. It possesses one advantage, and that is, no harm results from such an operation. Some have advised, that before you attempt to straighten the limbs, you should improve the general health; by so doing, however, you must bear in mind, that the bones themselves are becoming hardened, and greater difficulty placed in the way of treatment. I find that the splints, when properly applied, are a direct comfort to the little patients; and the softer the bones are, the greater the facility of removing the curvature, and the less the time occupied in so doing; so that in all cases let this be one of your first considerations. In cases coming under the term "false rachitis," you will rarely find it necessary to interfere with the general health; but, of course, should it be necessary, you will adopt such means as may appear expedient.

We have had but one case of "fragilitas ossium" in the Charity, and this in a female aged 17, who possessed that pallid, strumous, unhealthy aspect, so common in these cases. From her own and mother's account, she had suffered from fracture of the arms, legs, and thighs, about forty times. Walking across the room, the thigh-bone of one or other extremity would suddenly snap, when, in falling, her arm would be extended to protect herself, and the humerus become fractured. There certainly was evidence, from the curvatures existing, of very numerous fractures having occurred. She applied

at the Charity, for the relief of severe anterior curvature of the left tibia, which was bent almost to an acute angle at its lower third, the limb being about four inches shorter than its fellow. The tendo Achillis was divided by my late colleague, and extension kept up with decided benefit, as the leg was lengthened full two inches. Supports from the hip downwards were afterwards ordered, with which she was enabled to walk; and since she left the Charity no return of the fracture has taken place. This condition of bone, as well as the mollities ossium of old people, is totally different from that we have been considering, although some authors have designated the latter by the term of rachitis of old people.

OBSERVATIONS

ON THE

NATURE AND TREATMENT OF THE
MORE IMPORTANT DISEASES
OF THE NERVOUS SYSTEM:

With Illustrative Cases.

By EDWARD BLACKMORE, M.D. Edinb.

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[Continued from page 794.]

CLASS III. ON THE INSANE AFFECTIONS.

In a purely medical view, insanity presents itself under three forms:—1st, that with inflammatory symptoms, as in Cases IV. and VI.: 2d, that in which fever is absent, the pulse firm, not quickened, sometimes slow; the features pallid and shrunk; the blood not inflamed; as in Cases IV. VII. VIII.: 3d, that of sudden and violent paroxysms, with a quick rapid weak pulse, a cold perspiring skin, an extremely pallid wild glistening eye,—the nervous form of mania, of which Cases III. and V. are interesting examples. The diagnosis of this form from the second or the congestive variety of mania, is sometimes, however, extremely difficult, when it occurs in the course of an inflammatory affection of some organ in the chest or abdomen; an attendant hysterical symptom, or restless agitation and tremblings, in some cases help to solve the difficulty; but in others the symptoms are merely delirium, sleeplessness, and incessant talking, with a pulse not rapid or intermittent, but gradually failing in power,—a state not always referrible

to the previous abuse of stimulants, nor to severe depletory measures for the cure of the inflammatory disorder. In some cases digitalis has appeared to me to induce strong nervous delirium; but then the attendant sickness and irregularity of the pulse has clearly indicated the exciting cause. Does colchicum ever induce delirium? The embarrassment of the practitioner can only be relieved by profoundly studying the character of the constitution, and of the diseases to which the patient may have been previously subject.

The second form comprises the most numerous, chronic, and embarrassing cases of insanity. The character of the symptoms is most deceptive; with a low pulse and a cold skin, the most intense sanguineous congestion often subsists in the brain; and the most successful treatment is founded on this view of the pathology of the cases: see Cases I. IV. VIII. In another case of remittent mania, the paroxysm was instantly cut short on making a free incision in the scalp. In this maniacal congestion, however, the contractile power of the vessels is soon exhausted, and nervousness or imbecility is easily induced if depletory measures are carried far. In this order of cases I have known the oxide of zinc and camphor trusted to, when free purging and cupping-glasses on the scalp would have been the best treatment.

In the third form the obvious hysterical state, or the nature of the exciting cause—pain, grief, starvation, evacuations, digitalis, and spirituous liquors—easily suggest the successful use of cordials and opium, as in Cases III. and V. This form sometimes succeeds the first, from the abuse of bloodletting and sedatives.

CASE I.—A female, 33 years old, in the spring of 1831, was affected for two months with habitual pain in the head and vertigo, having been subject to epilepsy for two years previously, from a fright. In May the head complaints were lessened, and she had cough, hæmoptoe, and pain in the side, for three weeks in the second month of pregnancy. The chest complaints were then relieved, and the brain affection returned in severity, amounting to maniacal excitement, with spasms of the eyeballs and alimentary canal; her

manner stupid and silent; the pulse quick, without fever.

Bleeding to twenty ounces.

Then costiveness, which a large dose of calomel and scammony failed to relieve.

A blister, and antimonial mercurial ointment on the scalp; purgative clysters; calomel and croton oil.

In the next eight days a great amendment, from active purging; soundness of mind restored, but severe pain at the top of the head complained of (this might partly arise from the irritant ointment?) Mild aperients were continued, and she regained tolerable health through the autumn; but the epilepsy returned.

I saw her again on January 10th, 1832, when far advanced in pregnancy, in a state of violent mania, after having complained for ten days of pain in the head and sides of the abdomen, and lowness of spirits, with a presentiment that she should not survive her confinement.

Bleeding and purgatives; the blood not inflamed.

The next day an easy parturition, of which she appeared unconscious.

The 13th, in high maniacal excitement.

Leeches and antimonial ointment to the head; purgatives.

The 14th, no lochia, no milk; derangement continuing; pulse low.

A blister on the head; opium with tartarized antimony; a turpentine clyster.

16th, convulsions and death, a fortnight from the last attack of mania.

Inspection.—The scalp very thick; the skull very dense and heavy; the brain indescribably vascular; its blood-vessels amazingly enlarged and turgid; the pia mater extremely vascular; blood effused on it betwixt the convolutions, so as to separate them. The medullary substance dotted with bloody points. A small portion of the surface of the right hemisphere presented the appearance of incipient gangrene; the choroid plexus was studded with albuminous points, and very vascular. The medulla oblongata and spinal chord were much softened. The cerebellum exhibited marks of inflammation and softening, most intense at the posterior part, where fluid blood was effused.

Serum also was effused under the membranes and in the ventricles.

CASE II.—A woman, aged 26, who was subject to "nervous headaches," and had latterly shewn unusual irritability of temper, and mental dejection, was delivered of her first child on June 7th, 1834; and in the night afterwards she was restless, talkative, and did not recognize her nurse; but in the day nothing unusual appeared to her accoucheur, except that she desired improper food, and was impatient of contradiction. On the third day she complained of her head and bowels, and took an aperient, and a narcotic after it; the lochia were then rather scanty, and she was peevish, absent, and indifferent to her infant.

On the ninth day the accoucheur found her raving, but without fever; the pulse low. Leeches and purgatives were used; but the mania continued with little change for the next eight days, and with total sleeplessness. She made little complaint of pain in the head, but it was very hot; costiveness obstinate.

I saw her eighteen days after delivery in high maniacal delirium, without fever; the pulse low, the eye dull, the extremities very cold, sleeplessness and costiveness continuing; yet milk in the breasts. Tartarized antimony was given, and produced vomiting; the strait waistcoat applied; purgative clysters administered; and antimonial ointment rubbed on the head. After this she became calmer, and got some natural sleep; but the insanity continued, she refused all food and medicines, and in a week more died from the exhaustion naturally consequent on violent excitement.

Inspection.—The hind-head large; the scalp thick and vascular; the dura mater, at the vertex, much thickened and opaque; much serum on the arachnoid, which was also thickened and opaque over the hemispheres, dotted with calcareous and albuminous granules; a similar state of it at the base of the brain. The pia mater very turgid with florid blood, particularly betwixt the superior convolutions of the hemispheres, down to their utmost depth, and at the base of the cerebellum. The ventricles contained five ounces of serum; the choroid plexus very turgid. The substance of the whole brain and little brain very soft,

easily lacerated, and dotted with bloody points. The larger arteries much dilated; clotted blood in the sinuses. The upper portion of the spinal chord also very vascular.

CASE III.—A lady of a nervous temperament, and weak habit of body, in September, 1823, when about 38 years of age, was affected with severe gastrodynia, connected with costiveness and mental anxiety, while nursing a sick child; for which tincture of muriate of iron and colocynth were given with little avail. She came under my care on October 1st, 1825, suffering severely from her old malady. A purgative was given, and the stomach was relieved on vomiting. The next day, however, the pain was so severe as to occasion syncope; this was relieved in a few days by camphor and assafoetida, and applying heat to the region of the stomach. The pulse and tongue were then natural. Shortly afterwards there was a return of costiveness, with tenderness of the abdomen, cold perspirations, and pale urine. The antispasmodic medicines were repeated, with ether; and a clyster given, by which scybulous stools were procured, and the pain relieved for a few days.

On the 12th a severe return of pain, with diarrhoea, and extreme collapse of the vital powers; these symptoms abated on taking brandy and purgative clysters, by which again much black fetid stool was discharged. The day following much shivering, occasional vomiting, pulse quick, urine high-coloured

Effervescing salines; mercury with chalk; emollient clysters; and an anodyne cataplasm on the abdomen.

The 14th, pain relieved, but the animal and vital functions very low; the mouth sore from seven grains of the mercury.

Camphor julep, beef-tea, and salines.

The next day an improvement; spontaneous but clay-coloured stools. In the evening extreme exhaustion, and delirium after mental agitation.

Wine, camphor, and tincture of bark given.

The 16th, she had slept and felt revived, but had tremors, and nausea, and uneasiness in the bowels, which were relieved by castor oil, which procured a large solid stool; pulse 110, of good

strength. In the course of this day she was much exhausted, from having had six copious stools; and was revived after taking wine and an opiate.

The 17th, a return of pain at the stomach, and prostration; surfeited by beef-tea.

Camphor, warm friction, and animal jelly, ordered.

The 18th, sleeplessness, throbbing in the head, the bowels having been shut up for thirty-six hours. A clyster, with colocynth in it, then procured a hard stool with relief.

The 19th, some amendment, two dark stools having passed; wine and nutriment relished.

20th, six fæculent stools; the mind hysterical, and the head giddy; a look of dying prostration.

Bitter infusion, with ammonia, given.

The 21st, vital powers improved; the mind anxious; costiveness; acute pain in the epigastrium, followed by a tympanitic state of the abdomen.

The 22d, extreme coldness of the body; tympanitic state better on passing two solid stools and flatus; but restless and incoherent.

Laudanum and fætid spirit of ammonia given.

The 23d, a severe convulsion, and furious delirium; the eyes remarkably glistening, and rolling wildly; the bowels costive; little power of deglutition; pulse extremely weak; mouth aphthous. She appeared dying.

On the next day the same state continued. I gave about 280 drops of laudanum with twelve grains of colocynth, at three doses, in a few hours, with clysters; after which she slept, and on awaking was sane, calm, and happy; the pulse 120.

The 25th, still more improved; pulse 90. Five ounces of natural urine voided, the only dejection for forty hours, half a drachm of colocynth, with two ounces of castor oil, having been given in a clyster without effect. In the evening, however, copious stools and urine were voided.

The 27th, much improvement; natural stools from castor oil. Some fish and wine allowed.

The 28th, a sleepless night, and a return of pain in the stomach. Some castor oil then produced seven fæculent stools, with great relief of all the symptoms.

On the 31st she complained of tremors, and a pricking sensation in the skin, and of the night-mare in her sleep.

Rhubarb, and mercury with chalk; and a meat diet.

November 2d, again unhealthy stools and exhaustion, the medicine being neglected. The alteratives were repeated, with henbane, and aromatic spirit of ammonia, for a few days, with a good effect; when, as she complained of occasional stupor and a throbbing in the head, the stimulant was discontinued, and blue pill alone given.

On the 11th a mucous purging, for which extract of logwood and opium was given with advantage; and the appetite was aided by infusion of hop. A slight diarrhoea, however, continued to the 24th; and about the middle of December, after a return of costiveness, she suffered from dysentery, which was relieved by the warm bath, and opiate-starch clysters; but mucous diarrhoea remained to the end of January, 1826. In the course of the spring her health was restored.

In July, 1832, after fatigue and exposure to cold rain, this patient was affected with pain in the chest, and a catarrhal cough, for which, on the third day of the illness, leeches and sedative diuretics were employed by her medical attendant.

On the 5th day, after a sleepless night, she complained of pain in the head, and manifested confusion of thought, excitement, and alarm of mind, and profuse sweats. The bowels purged. On taking some acetate of morphia she slept calmly. The next day I saw her; the pulse 120, and very low; the countenance haggard; the mind alarmed; the head still pained; a slight cough remaining.

A blister behind the ear; a sinapism to the feet; a spirit lotion on the head; effervescing aperients and alteratives.

The next day I found that she had been in furious mania all the night, and had refused all medicine; the cough gone; pulse 120; no fever.

A drop of croton oil; half a grain of acetate of morphia; and in a few hours a drachm of laudanum in a clyster.

These remedies were followed by copious purging, and calm sleep for twelve hours.

On the 8th day of the illness, and

3d of the mania, still slightly delirious. Two five-grain doses of calomel, and an emollient clyster, the abdomen being tumid; after which a good night and decided relief.

The next day she complained of a sensation of falling on closing the eyes, and of nausea and heat of stomach; the bowels costive; pulse 86, tense.

A poultice on the epigastrium; small doses of digitalis and colchicum.

On the 5th day of the brain affection the mind natural, but vertigo and intolerance of light after disturbed days; the abdomen tender; the bowels costive.

Leeches on the stomach, and a laxative clyster.

After this she had a dysenteric affection, with an aphthous tongue, for a week, which was relieved by laxatives, alteratives, morphia, bitters, and lime water; but it was followed by severe and apparently dangerous diarrhoea for a fortnight, with much emaciation, which was cured at length by opium, catechu, and sulphate of copper; and in the autumn her health was restored by country air.

This lady died in 1837, of apoplexy, from effusion of blood in the brain, and diseased cerebral arteries.

CASE IV.—A man, aged 50, of intemperate habits, was affected in the summer of 1821 with mania, marked by hallucinations of vision and hearing, and incessant loquaciousness in Gaelic, his native tongue, which he had not spoken for some years. The pulse was slow, and there was no fever. The insanity appeared instantly after the sudden recession of erysipelas in the head from a wound. He was bled freely, and the blood was inflamed. After three days the erysipelas returned to the face, and the mania instantly ceased for three days; it then reappeared, with sleeplessness, and severe pain in the head, and high fever. He was again bled largely, and purged (the blood still highly inflamed), and got a drachm of laudanum at nights. Again an interval of sanity recurred, when the face had again become swollen for two days; and this was followed by a third paroxysm of derangement for a week, with lowness of spirits, and dropsical swelling of the feet. By repose, and aperients, and counter-irritants, the disease was cured at the end of six

weeks from the first attack; but he remained feeble in body and mind.

CASE V.—A man, aged 40, of intemperate habits, on August 19th, 1825, was attacked, after a debauch, with pneumonia for five days. He was bled with relief; but on the 15th furious delirium came on, for which he was bled largely twice from the arm, and also from the temporal artery, in the course of thirty-six hours.

On the 17th I saw him in wild delirium, out of bed, struggling violently with his attendant; the pupils dilated and fixed; the skin cool and in profuse perspiration; the pulse 140, and very soft; bowels costive.

Purgatives; a blister on the neck; a poultice on the head; calomel and antimony; and a grain and a half of opium on the bowels acting.

In a few hours he became calm and sensible; the pulse 86; and by the use of salines, and small doses of laudanum, he recovered favourably.

CASE VI.—A youth, aged 15, in the summer of 1823 fell from a hay cart, and struck his head; after which he became insane. Bleeding, and cold washing of the head, was ordered by a physician with success; and in June, 1824, he came under my care for a relapse, in which the perceptions were depraved, the passions excited, the propensities mischievous; the eyes intolerant of light, suffused, and prominent; the head pained and hot; the pulse quick and bounding, but soft; the tongue furred. After being purged, he was bled to sixteen ounces, which induced extreme syncope, the pulse falling from 100 to 60.

The head shaven; a blister on the neck; jalap and calomel as a purgative; and half a grain of tartarized antimony twice a day.

The next day the symptoms were relieved, except that the hallucinations continued; the pulse low.

The medicines continued.

The day following he had good sleep, having been vomited and purged by the medicines.

The 5th day the functions improved, but he fancied himself aboard ship (a sign of vertigo probably). The antimony was continued in frequent doses, after which he was affected with weeping from depressed spirits.

The 6th day the pulse quick; much heat behind the ears; pain and sense of heat in the bowels, and costiveness.

Purgatives, and cold to the head.

The 7th day a more natural state of mind, but febrile symptoms high.

Leeches and purgatives; antimony omitted.

The 8th day, yet more sane; head reported to be well; but pallidness and depression of spirits.

Blue pill with colocynth, and aromatic ammonia.

The next day he had good sleep, and was quite sane.

The 12th day, depressed spirits.

Subnitrate of bismuth, two grains and a half, thrice a day; animal food.

After this his spirits became more depressed, and he was observed to mutter in his sleep; the pulse was 60 in the morning, and 40 in the evening.

In another fortnight a slight return of derangement; and after the cold bath, the pulse fell to 49. The bismuth was omitted, and tepid bathing and purgatives substituted with great advantage. The functions were natural, but the mind depressed on seeing his relatives. Sea bathing was employed beneficially.

In the fourth month, however, he was again affected with violent mental excitement, sleeplessness, and costiveness; the face tumid; the pulse quick; after a bleeding and purgatives he was again relieved; the blood very florid, and the clot soft. In the course of the next two years he got several paroxysms, for which he was placed in an asylum. Afterwards his health was completely restored, and he now fills an important situation with honour.

CASE VII.—A robust man, aged 45, of strongly-marked melancholic temperament, fell into profound melancholy in March, 1825, attended with severe sleeplessness, pain at the epigastrium, flatulency, obstinate costiveness, a milk-white tongue, and a small slow pulse.

Saline purgatives; camphor with assa-fetida.

The medicines being inoperative, croton oil was given, and a blister and antimonial ointment applied on the epigastrium. The costiveness was then overcome, but his despondency remained, and he obstinately confined

himself to bed. Mild cordials and antacids were then used, with purgatives and the vapour bath, until May; at which time the bowels were sometimes costive for four days together, and three minims of croton oil were required to move them; the skin was extremely dry; the pulse 50; the sleeplessness better. A scruple of calomel, with one grain of opium, was then given at a dose, followed by croton oil; and the antimonial ointment rubbed on the head. In July he was well, and resumed his work as a blacksmith.

CASE VIII.—A lady whom I saw a few years ago, in profound and habitual melancholy, with extreme torpor of the nervous functions, which had continued in spite of various remedies, experienced extraordinary relief on accidental uterine hæmorrhage taking place.

SURGICAL CASES

OCCURRING IN THE

ST. MARYLEBONE INFIRMARY,

Treated by

R. A. STAFFORD, ESQ. F.R.C.S. &c.

Surgeon to the Institution.

(For the London Medical Gazette.)

Case of Compound Dislocation of the Ankle-joint.

ANN M'MICHAEL, æt. 55, admitted July 15th, 1844. In going down stairs, she fell, and a compound dislocation of the left ankle was the result. The joint was torn open, the fibula fractured, and the internal lateral ligament was ruptured. She was taken to the St. Marylebone Infirmary, and the dislocation was reduced, and the lacerated parts were kept in apposition by adhesive plaster, bandages, &c. The limb was placed on the side in a semiflexed position, and a splint was applied on the external side of the leg, whereby the joint was steadied by bandages, and kept fixed in one position. Considerable suppuration occurred, which continued for some length of time. The health of the patient declined, and she became much reduced, so much so that it was deemed necessary to advise the amputation of the limb. To this, however, she would not consent; her life was in imminent danger, but nothing could persuade her to have the opera-

tion performed. The limb was dressed with the greatest care, and every means adopted to support the general health. She took bark, quinine, and other tonics, and was allowed porter, wine, strong gravy, eggs, and nutritious diet, as she could take it. She lingered on in a very precarious state for rather more than three months, when a gradual improvement took place. Granulations sprung up from the wound. They increased, and at length covered the opening connected with the joint. The health now improved, and sleep returned, with a good appetite; the wound contracted slowly, and healed, leaving an ankylosed joint. On Feb. 20th, 1845, she was discharged well in health, but having a stiff ankle.

Practical Observations.—This is one of those cases which, although every symptom was against the recovery of the patient, yet from having a good constitution, and being supported, she ultimately struggled through the mischief she sustained from the injury. She was reduced to so low a state that a surgeon was justified in recommending amputation in such a case: indeed, it was his duty to do so, for the chances were so little in her favour that it was a hundred to one if she lived. Such cases are related by Sir Astley Cooper, Mr. Abernethy, and others. Their recommendation was that the limb, under such circumstances, should be removed.

Case of Tetanus, the symptoms of which resembled Hydrophobia.

On Nov. 10th, 1844, Thomas Smith, æt. 14, was admitted into the St. Marylebone Infirmary, with an injury of the great toe of the left foot, which had occurred four days previously, owing to a fall from a horse. There was a deep cut over the first joint, and the part was greatly swollen, and looking red. Leeches and poultices were applied, and the wound appeared to be going on well, when, on the seventh day, he complained of stiffness of the neck, which he ascribed to a cold. On the following morning his mouth became quite close, and trismus was complete, with a bending back of the cervical vertebræ. He could speak distinctly, although his mouth was firmly shut, but he could not swallow, for when an attempt was made, even with a teaspoon, to feed him with milk,

it was convulsively thrown back as in hydrophobia, and he had a dread of fluids, endeavouring by his hands to prevent the nurse from attempting to pour them down his throat, and, if persisted in, it immediately caused convulsions. His pulse was feeble, and at 140, and there was a profuse sweat on the face.

An incision was made into the erysipalatos swelling around the wound, and blood and pus escaped. He was ordered—

Six leeches to be applied as near as possible at the entrance of the medulla spinalis through the foramen magnum into the cavity of the skull. Extract of Belladonna was rubbed along the whole course of the cervical vertebræ, and was frequently repeated. An enema was administered, containing—

℞ Olei Terebinthinæ, ʒss.; Olei Ricini, ʒss.; Decocti Hordei, Oss.; Tinct. Opii, ℥i. M. ft. Enema.

℞ Hydrargyri Chloridi, gr. ij; Pulv. Jalapæ, gr. vj.; M. ft. Pulvis, in melle tertiis horis sumendus. Also—

R Tinct. Canabis Sativæ, ℥xx.; Mist. Camphoræ, ʒj.; M. ft. Haustus, sextis horis sumendus.

When an attempt was made to administer these medicines they were convulsively thrown back.

He gradually got worse, but the convulsions were not severe. There being tenderness, and a disposition to a tympanitic state of the abdomen, he was fomented with a turpentine fomentation. Ordered—

℞ Acid. Hydrocyanici (Scheele) ℥ij.; Morphine Muriat. gr. $\frac{1}{4}$; Mist. Camphoræ, ʒj.; M. ft. haustus, statim sumendus, et repetatur quartis horis.

This draught was convulsively rejected. The breathing now became very difficult, and in twenty hours from the time he was first attacked, he expired.

Post-mortem.—No appearances remarkable in the brain itself, but the base of the cerebellum, the tuber annulare, and the medulla oblongata, were much redder than natural. The medulla spinalis also, along the cervical vertebræ, was redder than it ought to be, but the rest of the spinal chord was healthy; the vessels of the arachnoid membrane of the base of the brain, and medulla oblongata and medulla spinalis in the cervical portion, were injected with blood; there was inflammation of

the mucous membrane of the trachea, the larynx, and of the pharynx.

Practical Observations.—It appears in this case that not only the masseter, and those muscles which shut the mouth, were affected, but those of the œsophagus also, in the same manner as they are in hydrophobia. The moment any fluid was attempted to be swallowed, spasm was induced. It is evident that the Extract of Belladonna had great power in preventing the paroxysms of spasm of the trunk, for hardly any ever occurred. In two other cases of the same description, and where opisthotonos was complete, I have used the Belladonna in the same manner, and in both the exacerbations of convulsion were prevented. The Tinctura Canabis Sativa appears to have been attended with little benefit, but this, perhaps, considering the ejection of everything that was taken, cannot be considered a fair case: as yet, however, the effect of this remedy, from the cases which have been published, appears to be very doubtful.

Two Cases of Phlegmonous Erysipelas, from wounds poisoned by Copper.

CASE I.—Margaret Pitfield, æt. 68, washerwoman, of temperate habits, admitted 13th Dec. 1844, pricked her right thumb with a pin, which ran into the flesh about the eighth of an inch. She afterwards scoured out a dirty copper, and the thumb immediately swelled to double its natural size. On the following day the whole hand and arm became immensely swollen and inflamed. She suffered great pain; fever came on, with a quick pulse, thirst, and a furred tongue. The inflammation rapidly spread in the cellular integument all up the fore arm, and on to the humeral part. Leeches, fomentations, poultices, &c., were applied, but extensive abscesses formed, both in the hand and arm. These were opened, but others appeared in different parts of the cellular integument and under the fascia. Large incisions were made into them, and a profuse discharge of pus was the result. This state of things remained for a considerable time (for at least two months), when the inflammation of the arm gradually abated, and the wounds healed, but the hand, and more particularly the fingers, remained tumid, and more resembled the foot of an elephant, or the disease

termed elephantiasis, than the natural limb. The fingers and back of the hand were œdematous, and it was necessary to make frequent punctures in them to let out the fluid, which was transparent. Abscesses still formed in the palm of the hand and on the wrist, and as often as it was required they were opened. At length it became necessary to make an extensive incision from the middle of the forearm, along the wrist, over the tendons, into the palm of the hand. From this time the swelling went down, and the wound discharged freely. A bandage was lightly applied on the arm and over the hand, so as to make slight pressure. An ointment of the iodide of potash was rubbed upon the tumid parts, and a lotion of the Decoctum Quercu constantly applied. Absorption gradually took place, and the tumefaction diminished. The hand now began to assume its natural form and appearance. The wounds healed, and after four months treatment the patient got well, and ultimately will have a tolerably free use of the hand. The constitutional treatment of the case was, first, during the fever and irritative symptoms, purgatives, sudorifics, and saline medicines. Afterwards, when the active symptoms had abated, and when it was necessary to support the health, bark, quinine, wine porter, and a generous diet.

CASE II.—Hester Jones, æt. 65, charwoman, admitted 21st January, 1845, with abscess in the right hand, and diffuse cellular inflammation, extending a considerable way up the fore arm. Both the hand and arm were immensely swollen and painful. The account she gave of herself, is, that while she was scrubbing the floor, the wires of the brush, which were made of copper, and which, to use her own expression, “were caulked,” ran into the palm of her hand. On the same evening, she found her hand extremely painful, and she could not use it. It began to swell to nearly double its natural size. An abscess formed in the palm, which was opened, and poultices applied. Other swellings formed both on the back and palm of the hand, and which contained pus. These, as fast as they occurred, were opened, but sloughing took place over the tendons of the wrist, which were exposed. This state of parts continued for two

months; at length, the inflammation abated, the wounds healed, and in March she was discharged, cured. The constitutional treatment very much resembled that in the last case. In the febrile symptoms, she took purgatives, antimonials, and salines; and afterwards, bark, quinine, wine, porter, and a nutritious diet.

Practical Observations.—These cases show that wounds can be poisoned by copper, or, rather, its chemical changes. There can be little doubt that what is termed verdigris, or the acetate of copper, having impregnated the wounds of these two individuals, was the cause of the immense irritation and mischief which arose in the cellular integuments and parts around it. In animal poisons, the absorbents take up the virus; they become inflamed in consequence of it, and, through their channels, it spreads on to the glands, causing supuration, &c. Hence we see this occur in dissection wounds, in syphilis, in variola, or small-pox, &c. It appears, however, that when the acetate of copper, or other substances of the same character, poison wounds, they are not taken up by the absorbents, but that their irritating effect spreads on into the net-work of cellular tissue forming the integument, and in so rapid a manner, that tumefaction and inflammation instantly occur. The same may be observed in erysipelas; whatever this poison may be, and a poison it is, for it is infectious from the wound of one patient to that of another, the skin and the cellular structure immediately participate in it; abscesses form, the cellular integument sloughs, and the death of this part, if the inflammation be not arrested, takes place. In the first of these two cases just related, it may be observed the virulence of the poison, and the very great mischief that arose in consequence of it. On the same evening the thumb was double its natural size, and, on the following morning, the hand and arm, extending up to the humeral part, also were swollen to an immense extent. Collections of pus formed in different parts of these swellings, and, as often as they were relieved, others made their appearance, and, after as many as, at least, twenty incisions, and some of them very considerable, the disease abated, and ultimately was cured. In the second case, which was not so severe as the former,

abscesses formed in the same manner, and even sloughing took place over the wrist, exposing the tendons. I am aware that it has been doubted whether wounds can be poisoned by verdigris, or the acetate of copper, and I myself once considered it "a vulgar error;" I have, however, now seen so many cases, and the present two afford such strong evidence of it, that I am disposed to think the fact is established.

[To be continued.]

THE AMENDED MEDICAL BILL.

To the Editor of the Medical Gazette.

SIR,

THERE are probably few members of the medical profession who have not read with pleasure the speech delivered by Sir James Graham in the House of Commons, on the 25th ult., on the occasion of his asking leave to introduce his Medical Bill. The Right Hon. gentleman has evidently bestowed much and careful consideration on the subject of medical reform, and has not been an inattentive observer of what has been passing in the profession during the last six or seven months. There are now surely none who will impugn his motives in bringing forward this measure, or deny that he is actuated by a wish not only to legislate herein for the public welfare, but to make his bill acceptable and satisfactory to the profession itself.

The new bill is in several respects an improvement on the former one. It recognizes to a much greater extent the principle of protection, although the means provided for giving effect to that principle still fall short of what is required, and of what is moreover attainable by act of Parliament. The power to enforce penalties is to remain with the Apothecaries' Company; but it is notorious, that (owing probably to their great expense) the prosecutions hitherto instituted by the Company have been very infrequent; and in the new position it would occupy, if this bill should become law, the penal clauses of the Act of 1815 would be little more than a dead letter. The future licentiates of medicine and surgery would not be licentiates of "the Hall;" and although two persons, appointed by the Court of Assistants, are to aid the College of Physicians in the examination

of this grade, it does not appear that any portion of the examination fee would pass into the coffers of the former institution. Under these circumstances, is it to be supposed that the Apothecaries' Company will undertake to protect the whole of the qualified profession against unqualified competitors? Clause 35 of the present is much more explicit and comprehensive than Clause 31 of the original bill, and under the superintendence of a vigilant Council of Health, might become a very useful provision. The term "doctor," comprises at this time a large proportion of illegal practitioners, but many doctors might hereafter make it appear that they do not profess to be doctors of *medicine* but of *philosophy*, or something else. The author of the bill having acknowledged the propriety of making new restrictions, and of not abolishing others already in force, would it not be better to insert at once a penal clause against—not only those who practise with a fraudulent title—but against those who practise at all—without a license?

In detailing his views with respect to the constitution of the Council of Health, Sir James Graham declares that "general practitioners, and country practitioners, have a right to be represented in the Council;" and he intimates his intention of advising, that a portion of the members of this body, to be nominated by the Crown, should consist of this class of the profession. The Home Secretary would doubtless fulfil his pledge, and there is no reason to fear that he would not make a judicious selection; but Sir James Graham will not be Secretary of State for ever, and there is in the printed bill no provision for the appointment or election of general practitioners, although a clause or clauses to that effect will probably be inserted on the second reading, or "in Committee." It will be observed, moreover, that the physicians and surgeons on the Council would be elected by the fellows of their respective Colleges, while the general practitioners would be appointed by the Crown, the former being elected for three years, the latter (agreeably with Clause 4) holding office during her Majesty's pleasure. Now, whatever regulations are made with respect to one class of the profession, they should apply to all. If the phy-

sicians and surgeons are to be elected, the general practitioners should be elected also. If the latter should be appointed by the Crown, and for life, it cannot be said that their class of the profession would be *represented* in the Council of Health.

Respecting the propriety of all practitioners entering the profession through a common examination and license, the remarks of Sir James Graham are pointed and sensible. "I earnestly desire," says he, "to see one admission to practise, by an examination, common to all; and that after all shall have passed one common portal, each should choose what branch of medicine he may wish to practise." Objections have, it appears, been made, on the part of the College of Physicians, to such an arrangement, on the ground that it would interfere with the courses of study prescribed by the Universities. That the high position in society now occupied by the English physician is, in a great measure, to be attributed to his residence at one of the Universities, and to the connections he is there enabled to form with parties intended for the other learned professions, and with the aristocracy, is undeniable; and it would not be for the advantage of the profession that such a state of things should be annulled; but it is by no means apparent that the views of Sir James Graham, and that large body of the profession who think with him, could not be carried into effect without producing such a result. Were a *minimum* age to be fixed for the attainment of the license to practise, it would not follow that all should apply for it *precisely* at that age. The license would signify that the person holding it was considered a safe and properly qualified practitioner, in the full acceptance of the term. The University degree would denote that he had devoted himself more particularly to the strictly medical part of the profession; and his association with a College of Physicians would show the line of practice he was desirous to adopt. The examination for the license required of him (in common with other grades of the profession) by the State, might be submitted to a year, or a month, or day, within the time of his applying for his degree or admission into a College of Physicians. To insure, as far as possible, both uniformity and efficiency,

Clause 21 provides, that the curricula of study and particulars of examination of the Universities and Examining Boards shall not be valid unless approved by the Council of Health. The doctor of medicine, therefore, after passing the University examination for his degree, as well as the State examination for his license, should be admissible into the Colleges of Physicians without further examination.

The ages at which persons are to be admitted into the different grades of the profession have been frequently commented upon; and it would perhaps be advisable that these should not be specified in the bill, but left to the discretion of the Council of Health. It is considered by many, that, at the age of 21 years, few men are fitted to undertake the responsibilities of the medical practitioner. Sir Benjamin Brodie, Sir James Clark, Mr. Green, and other men of eminence, have expressed an opinion of this kind; and if it be too early now, it will be still more so a few years hence, when, in conformity with the rapid increase of medical science, a greater amount of knowledge will be required of candidates for the license, than they are at present expected to possess.

Clause 20 of the new bill gives to licentiates of medicine and surgery a right of admission (on payment of a fee) into the Colleges of Surgeons, as members or licentiates thereof (the former term would be preferable). They would be examined also by the Colleges of Physicians, and might on that account be associated with those Colleges quite as consistently as with the Colleges of Surgeons. In the profession of the law, we find the same individual admitted as an attorney of one of her Majesty's courts at Westminster, and a solicitor of another. So in medicine, the person intending to practise both medicine and surgery, might be an associate of a College of Physicians, and a member of a College of Surgeons: physicians and surgeons being *fellows* of their respective Colleges. The recent charter of the Col-

* The able Editor of the British and Foreign Medical Review, anticipating the April number of that journal, has put forth a statement relative to the new charter of the College of Physicians, wherein he announces that the fellowship is to be limited to "a small number of the members of the corporation." The fellows at this time are, with few exceptions, physicians residing in London; and as the annual vacancies occasioned by

lege of Surgeons provides that *future* members of the College shall be admitted to examination for the fellowship at the expiration of twelve years from the dates of their diplomas—at the age of 33,—a period somewhat late (a clergyman may be a bishop at 30); but licentiates of medicine and surgery are not to be admitted as associates of the College of Physicians of England until 40 years of age, nineteen years after the period fixed for the license! If, in the first instance, physicians and surgeons are to be admitted at the ages of 26 and 25, and in each case after *five* years of study, surely there can be no good reason for making a difference of seven years in the admission of the associates of one College and the fellows of another. If, as is well known, many of our ablest physicians have been general practitioners, why should the public be deprived of the services of this class in the character of physicians (provided they be men of liberal education, and wish to practise as such), until so advanced a period of life as 40 years. Agreeably with Clauses 16 and 22, the general practitioner, how learned and highly qualified soever he may be, must, in order to become a physician, either matriculate and reside two years in a University for the degree of M.D., and undergo an additional examination before being admitted into a College of Physicians, or he must wait until he reach the age of 40, to be admitted to examination by, and admission into, the College of Physicians of England. Supposing that the Council of Health would insist on licentiates being well educated men, these regulations are more stringent than is necessary, either for the public inter-

ests or for the dignity of the *order* of physicians.

The admission of licentiates to the highest honours and privileges of the aforesaid Colleges at an earlier age than is proposed, added to the provision made by Clause 20, would diminish, in a great measure, the anxiety now felt by a large body of the profession for a College of General Practitioners; as, in this case, a majority of the latter would aspire to become Associates of a College of Physicians, or Fellows of a College of Surgeons. The new College would then consist, *for the most part*, of the junior members of the profession; and it would be better for them even to remain unincorporated, than belong to an establishment which would hold a place in public estimation inferior to that of existing Colleges. In the meantime a more liberal policy should be adopted with respect to the admission of *existing* members into the *fellowship* of the English College of Surgeons: injustice would thus be obviated, discontent removed, and there would then perhaps be no *necessity* to give a vote in the election of the Council to *future* members of the College, as, at a given age, they would all be admissible on examination into the fellowship; and, becoming members with this understanding, they could not complain of any oppressive or invidious exclusion from the privileges of the higher grade.

The advocates for a College of General Practitioners have probably overrated the advantages which such an institution is calculated to afford: in other words, they have looked to incorporation as an instrument for the correction of grievances which are removable by other means. What are the principal grievances which press upon this grade of the profession? The majority of them may be attributed to *unfair competition*, which may be spoken of under two heads—1. Dissimilarity of qualification; 2. Want of adequate protection. Complaints arising under these heads are common to the whole profession—to physicians and surgeons who have their distinct Colleges, as well as to general practitioners who have not. The first of these evils would be obviated by the establishment of that uniformity of qualification, which it would be one of the most conspicuous duties of the

death must be few, and the filling up of the same will be by personal voting at the College, the *fellows* will continue to consist almost exclusively of metropolitan physicians, who will be empowered to elect the governing body, and the representative in the Council of Health of the College of Physicians (no longer of London, but of England. The future "licentiates of medicine and surgery" are to be in part examined by, and of course to pay a fee to, this College, without receiving from it further recognition; and it is to comprise all the physicians in England; but if Dr. Forbes's information be correct, the provincial physicians will have but small *chartered* privileges, besides those of paying their money to the College, and taking in return the empty title of "associate." Let us hope that the learned Editor is under a mistake; but if this be not the case, any such clause in the proposed charter should be vigorously and at once remonstrated against, not by physicians only, but by the whole profession.

Council of Health to procure throughout the United Kingdom (Clause 21). The second would be rectified, as far as it is capable of being, by the adoption of stringent measures against unqualified practitioners. Much discontent has arisen from the over-crowded state of the profession—an evil which has of late begun to correct itself, and which would be still more effectually controlled by such regulations as we are warranted in supposing that the Council of Health would either originate or sanction.

The general interests of the profession would be much more likely to meet with attention from such a body as the Council of Health (fairly constituted), than from the Councils of particular corporations. Our first aim, therefore, in reference to medical government, should be to have the interests and feelings of all classes of the profession adequately represented in this body. Its powers would be extensive in controlling not only individuals but corporations; and the mixed character of its constitution would be a safeguard against unjust or partial legislation. Of its important bearing on the public welfare, nothing need be said in this place.

Without wishing to impute unworthy or selfish designs to the general practitioners of London, than whom a more honourable or useful class of persons does not exist, it is undeniable that many, if not most, of the peculiar benefits to be expected from the establishment of the proposed new College would be confined to their body. The College would have a building, a library, reading rooms, lectures, evening meetings, &c.—all very good things—but which could be very imperfectly shared by practitioners resident in the provinces, and, for those living in London, would be equally attainable through a Metropolitan Association of General Practitioners. As for the examination and licensing of this class of the profession by men of their own grade, there are few general practitioners, I should think, who would not prefer being examined, and having their certificates signed, by eminent physicians and surgeons.

It may be said, that without a distinct incorporation, there would be no satisfactory way of electing persons to represent the general practitioners in

the Council of Health; but this requires confirmation. All members of the Council would, in the first instance, be appointed by the Crown; and when the time should arrive for a portion of them to be chosen by the profession, it would not be difficult to form a constituency out of the registered general practitioners, in accordance with details which should be specified in the bill; and the election of their representatives might be determined by voting papers supplied to those who should demand them, the names of candidates, (previously announced), being given at the same time. If personal voting should be deemed preferable, assessors might be sent to certain places to conduct the election.

The institution of a third College has, I admit, been advocated by a large number of general practitioners, both metropolitan and provincial; the preceding remarks are, therefore, offered with much deference to the opinions of those who are really anxious for its establishment. The arguments hitherto adduced in its behalf, and the proposed methods of organizing it, have failed to convince me, amongst many others, that under existing circumstances and prospects, I should best promote the welfare of the class to which I belong by giving it my support, although not prepared or presumptuous enough to affirm, that under no circumstances, and on no conditions, would an incorporation of this kind be desirable. The solution of this question must greatly depend on the course which matters may take during the next few weeks, and on the position in which the general practitioners are likely to be placed by the proposed bill and College charters*. Sir James Graham has certainly shown no disposition to hurry forward his measures, but has given time for their due consideration and discussion. With respect to his intention of recommending to the Crown the establishment, by charter, of a "Royal College of Medicine, Surgery, and Midwifery," he has declined to pledge himself until further inquiry be made into, and further information be elicited upon, a subject of so much importance. In this he has probably exercised a sound discretion, particularly as three-

* The charter of the College of Surgeons of England, it is said, will be modified, or a supplemental charter will be granted.

fourths or more of the general practitioners of England have, up to this time, made no declaration in its favour. An *Association of General Practitioners* might be very useful both in watching and assisting the Council of Health.

Clause 17, instituting examinations in midwifery, and Clause 36, relating to persons guilty of flagrant misconduct, are useful parts of the amended bill. Clause 31 is a particularly valuable provision. The power thereby given the licentiates of medicine and surgery to demand fees for medical and surgical advice, &c. will be hailed with gratification by those general practitioners who are anxious that their class of the profession should abandon the practice of making their remuneration dependent on the quantity of medicine—not, perhaps, taken by, but sent to, their patients—a custom followed by many honourable and scientific men because it is a custom, although one which is much better calculated to answer the purpose of the knave, or the ignoramus, than of the honest, upright, and intelligent practitioner: the knave, whose conscience allows him to send a larger quantity of medicine than is requisite for the patient's stomach, or the just claims of his own pocket; the ignoramus, who may ring the changes on a variety of "simples" before meeting with one adapted to his patient's case. This has, indeed, been a grievance, and more than a grievance; it has been a degradation to the medical practitioner, and an injury to the public.

The connection of the Council of Health with the Crown has been objected to; on the part of some, perhaps, from want of sufficient reflection on the probable consequences of such an arrangement. We have long complained that medical interests are not understood, and consequently not cared for, by statesmen and legislators, and in what manner could this complaint be remedied so effectually as by connecting the profession with the State, and by having, as the president of its supreme Council, the minister to whom is entrusted the administration of the domestic affairs of the United Kingdom? On the other hand, the State has hitherto but imperfectly availed itself of the services of the profession in the promotion of measures relating to the public health, medical jurispru-

dence and police—in a word, of State medicine. The efforts of medical men have, in times past, been directed chiefly to the relief and cure of diseases; they will henceforth be employed in the not less noble and philanthropic cause of their prevention. To give effect herein to the deliberations of a medical Board, or Council, a connection with the Crown is indispensable. Through the Home Secretary, the Council would be responsible to Parliament; and as the community at large would be deeply interested in its proceedings, it is only right that such responsibility should exist. It hence becomes necessary that the Home Secretary, or some other of Her Majesty's advisers, should have a voice in, or a veto upon, the acts of the Council and the appointment of its members, and this is quite compatible with a full and fair representation, in this body, of the members of the medical profession.

There is now, sir, a reasonable prospect of a medical bill passing the legislature before the close of the present session of Parliament. Its author has evinced a desire to make it a useful and satisfactory bill. The profession will meet his endeavours in a corresponding spirit, and will doubtless, as far as they are able, assist him to render his proposed enactment as perfect as the complicated nature of the questions and interests involved will admit of its being made.—I am, sir,

Your very obedient servant,

CHARLES THOMAS CARTER.

Hadley, Middlesex, March 20, 1845.

MEDICAL GAZETTE.

Friday, March 28, 1845.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

THE ADDRESS OF THE SOCIETY OF APOTHECARIES.

THE Master and Wardens of the Society of Apothecaries have favoured us with their Address to the General Practitioners of England and Wales, on the provisions of the present Bill

as contrasted with those of the one introduced in the last session of Parliament. After careful perusal, we confess our utter inability to discover its precise drift.

The Society set out by congratulating their medical brethren on the fact of their merits having been properly acknowledged by a minister of the crown, and cheerfully accept this as a pledge that in whatever legislation may follow on medical affairs, no measure will receive the support of the Secretary of State, which can be proved to have a tendency to lower the status, or impair the usefulness, of the class of general practitioners. On this point they may rest perfectly secure. We believe it to be the sincere wish of Sir James Graham to promote the good of all parties.

The Society observe that the constitution and power of the Council of Health remain unaltered; still, in consequence of what has fallen from the Right Hon. Baronet, the general practitioners may reasonably anticipate that a portion of the six members reserved to the nomination of the Crown shall be from their body. According to the plan in contemplation, we presume there shall be not less than two general practitioners appointed to the Council of Health, one a town, the other a country practitioner. A college of general practitioners, to be upon an equality with the Colleges of Physicians and Surgeons, would of course be entitled to have only one representative in Council. Thus they would virtually be more fully represented in their present estate, than if embodied by charter.

The Society have no reason to doubt but that the Right Hon. Baronet will state more explicitly whether it is intended that their Court of Examiners shall have an equal voice with the College of Physicians in determining the curriculum of study, and whether,

in conjunction with the College, they shall form a joint board with equal powers as respects all its members in reference to the examination of licentiates.

They are of opinion that the restriction in the Act of 1815, compelling them to elect the Court of Examiners from among the members of their corporate body, is most wisely removed by the present bill. Henceforth the Court of Examiners will be eligible from Apothecaries of ten years standing, (whether members of the Society or not) until there are licentiates of ten years standing on the register, after which the examiners must be chosen from such licentiates.

They observe, that the general practitioners will naturally seek further information touching the provision, that every person registered after examination as a licentiate in medicine and surgery, shall be admitted *as a member or licentiate of the College of Surgeons*. We certainly think this point requires elucidation.

In reference to the midwifery clause, the Society submit to the profession "whether the institution of an authorised although a voluntary examination in midwifery, is not as much as it would be expedient to seek for at the present time." This subject requires mature deliberation, inasmuch as the clause for false pretences of qualification does not hinder any practitioner from calling himself an accoucheur, and perpetrating all species of malpraxis. It is only the other day that a coroner's jury in Norfolk returned a verdict of manslaughter against a member of the Society of Apothecaries, for having caused the death of a parturient woman by forcibly extracting the entire uterus, with several feet of the large intestine.

The clause providing for the registration of medical students is altered,

and in the opinion of the Society improved.

The Society complain that the power of determining *which form of testimonial* (namely, that of physician, surgeon, or licentiate) shall qualify for situations in public institutions, should be vested in the Council. This objection appears to us groundless, provided the general practitioners are to have a voice in that Council, as fully intended by the Home Secretary.

They regret that no attempt has been made in the present bill to diminish the difficulties which beset the enforcement of penalties imposed by the Apothecaries' Act. We know of no means of obviating the difficulties in question, except in making all persons convicted of practising without certificate liable to summary punishment before a magistrate, or two magistrates.

In reference to the new clause, empowering the Council of Health to erase from the register any person who shall be convicted of felony, and so on, they suggest that this would be more likely to answer the purpose, were power given to the said Council to restore a person to the register, whose name had been erased, should a fitting case for the exercise of such power offer. "The inability of the Council, *under any circumstances*, to restore a name which has once been erased from the register, would probably be found to render the Council unwilling to exercise its power in cases which, under other circumstances, would justly merit such a punishment."

The Society conclude by stating, that they shall reserve to themselves the full right of deciding upon the particular mode in which they may be led to further the wishes and objects of their professional brethren.

It would seem from the above document, that the Society of Apothecaries

are ready to do anything, or nothing, just as the tide may turn. The worshipful guild are evidently at a loss which way to steer during these times of agitation and tumult.

GULSTONIAN LECTURES,

Delivered at the Royal College of Physicians,

By G. OWEN REES, M.D. F.R.S.

Assistant-Physician to Guy's Hospital, and Physician to the Pentonville Prison.

IN my last lecture I had the honour to bring before your notice a mode of dividing the blood physically into certain constituents, and entered upon the anatomy of the corpuscle, and an examination of its component parts. I shall now consider the arrangement of these components, as lately described by Mr. Lane and myself, in a paper published in the Guy's Hospital Reports, in which communication we also entered at length on the subject of endosmotic action, as shewn on the corpuscle under the microscope. It will be remembered that the corpuscle has already been described as made up of three constituents, viz. an envelope, a nucleus, and a red colouring matter enclosed by this envelope or sac, and I shall now proceed to describe the manner in which Mr. Lane and myself have been led to believe that those constituents are arranged. The human corpuscle is circular in form, flattened, and has been described to present a double concave surface. Its diameter measures on an average $\frac{1}{2500}$ of an inch. This circular form is given by the envelope, which is distended by contained fluid, and is a delicate membrane, or vesicle, firmly adhering to the surface of the nucleus at its centre. This nucleus is flattened and circular like the envelope, is contained within it, but does not fill it, being only two-thirds its diameter; but it is situated in the centre of the envelope, and is adherent, as before stated, to the membrane at its centre only; leaving a canal all round its free edge, which canal contains the red colouring matter. The nucleus, though flattened and circular, differs from the envelope in not being rounded at its edge. It measures about $\frac{1}{3500}$ of an inch in diameter. Now, though it is not my intention to enter at length on a description of the various methods at present in use among chemists for analysing the blood, I cannot refrain from directing attention to the subject on the present occasion, as there are difficulties in the way of effecting this, which those who have not combined the study of minute anatomy with chemical knowledge can scarcely

have felt, and, until some understanding exists, among those who make anatomy and physiology their pursuit, on several points which at present divide opinions, we can scarcely hope that the application of chemistry to the furtherance of pathological research will be productive of those benefits which so many have hoped to see realized. The attention of chemists has up to the present time been very much directed to the detection of variations produced by disease in the proportions of the three principles or constituents of the blood, viz. the serum, fibrin, and red corpuscles; and a multitude of analyses have been made for the determination of these points in various diseases, and we have as yet adopted no other mode of inquiry (except it be to detail certain abnormal constituents of serum) to discover variations from the established healthy standard. No experiments have been made, for instance, with a view of ascertaining any variations in quality which probably occasionally exist in the normal constituents of blood, the chemical characters of its colouring matter are not well described or understood, and the gases contained are not yet sufficiently examined in health to afford a normal standard of indisputable correctness. The methods at present in use for examining the blood quantitatively will be considered very faulty by all who are well acquainted with even the most obvious physical properties of the blood-corpuscles. The most approved method of chemically ascertaining the proportion of fibrin, serum, and hæmotosine in the blood, is the following; but I must premise that hæmotosine is frequently used to express corpuscles, for it is the weight of these bodies, and not that of the true hæmotosine which chemists obtain by their analyses—a fact showing what disadvantages we labour under, even at the present moment, from a positive want of information on the part of some of those who are employed in chemical analysis. The most approved method of examination is as follows. A portion of freshly drawn blood is poured into a bottle closed by a glass stopper, and containing fragments of lead; this is agitated for several minutes, and weighed, to ascertain the proportion of blood used; the lead is then withdrawn, having collected the fibrin; this is removed, and carefully estimated, after drying and washing, allowance being made for the presence of adherent serum. The fibrin being got rid of, the corpuscles are allowed to subside in the serum, which is then poured off, and means taken to ascertain its constitution. The corpuscles are now dried, having been weighed in the moist state, and the weight when dry subtracted from the weight when moist, which, of course, gives the quantity of water present in the moist mass. This

water being regarded as forming part of the serum adherent to the corpuscles in the moist state enables us to ascertain how much of the solid dry matter is to be considered as solid matter of serum, for having performed the analysis of the serum decanted, of course we have ascertained the relative proportions of water to solid matter contained in it. The quantity of solid matter then indicated by the water evaporated from the moist corpuscles is subtracted from the whole weight of the dry mass of corpuscles and serum, and the difference gives the weight of dry corpuscles. The weight of the solid matter of adhering serum is of course carried to the account of the serum in the analysis.

From what you already know of the physical characters of the blood, you will at once perceive that the corpuscles are estimated here, and not the hæmotosine, as some have presumed; that the blood is divided into serum, fibrin, and corpuscles, and that the weight of the hæmotosine contained within the envelope of the corpuscle is not ascertained. It is important that you should be aware of this, as pathologists, for the red colouring principle has peculiar and important duties to perform in virtue of its chemical characters, which are quite distinct from those of the envelope and nucleus, which are estimated with it in this form of analysis. There is another point to which I must beg your attention, as it shows the absolute necessity of a knowledge of physical structure for those who are occupied in the analysis of the blood. It will be remembered that the first step I described consisted in ridding the blood of fibrin by agitating pieces of lead in a weighed quantity of the fluid, in order that the pieces of metal might collect the fibrin, which could then be removed, washed, and estimated.

From what you already know concerning the physical qualities of the blood-corpuscle, you will at once perceive that from the moment coagulation of fibrin commences, the liquor sanguinis will decrease in specific gravity, owing to deprivation of part of that solid matter which it before held in solution. The necessary result of this must be the establishment of an endosmotic current tending to fill the corpuscle, which will now become rounded and distended. Now since it is probable that in some diseased conditions the specific gravity of the liquor sanguinis may become considerably lowered before the whole of its fibrin deposits from solution, it is to be expected that every corpuscle will be enclosing within its envelope a certain quantity of this principle (fibrin), which will enter it by endosmosis dissolved in the liquor sanguinis, which has become lowered in specific gravity. In this manner we see how it must probably happen, during

this first step of analysis, that a certain portion of the fibrin which, in the natural condition of the blood, existed as a constituent of the liquor sanguinis, will be estimated as hæmotosine, or, rather, have its weight added to that of the corpuscles; the weight of fibrin being proportionally diminished. That the weight thus lost may be very considerable, when the fibrin coagulates slowly and imperfectly, appears pretty certain, for the liquor sanguinis is closely studded with corpuscles, every one of which will take on this action, and enclose a portion of fibrin. If we consider the condition of corpuscles which have endosmosed serum (an action which must always occur) during the coagulation of the blood, we shall perceive that the determination of the proportion of the solid matters of serum has also been interfered with owing to this endosmotic action. According to the view taken by the chemists, we ought to consider the corpuscle of the blood as a solid impermeable body, and the whole of the moisture adherent to it should be water which at one time had formed serum, whereas our knowledge of structure at once enables us to perceive that this proportion of water is in part a constituent of the fluid contents of the corpuscle, which is not serum either in its chemical or mechanical characters, being red in colour, and containing iron, and, moreover, possessing in its natural state a specific gravity exceeding that of the serum; being, indeed, as heavy as the liquor sanguinis. I am anxious that this source of variation in the perfection of chemical analysis as now performed should not be considered as a trivial cause of error, and must therefore again call to mind the enormous multitude of floating corpuscles in the liquor sanguinis, as it exists in the blood, each of which will tend by endosmotic action to vary the correctness of results obtained by chemists, who have conducted inquiries as though these floating bodies were composed of solid tissue.

It appears probable that the analyses of the entire blood which have been made up to the present time, are extremely faulty, and that though they have served to show a difference in the constitution of the fluid in health and in disease, when submitted to the same ordeals of manipulation, still they do not possess that absolute correctness which is desirable, and almost necessary, to enable us to reason correctly on the differences so detected. The point of view in which the examination of the blood should be regarded, in order to render the services of the chemist available to the pathologist, would appear to be that which should embrace the examination of the liquor sanguinis as serum containing fibrin in solution, and, if possible, should treat of the contents of the corpuscles as they exist in the circulation, or as nearly

so as possible: we must always be liable to error if we prosecute analysis, as it is at present performed, by operating on corpuscles changed by endosmotic action in consequence of the removal of the fibrin from the liquor sanguinis. They are no longer in their natural state, but are distended with serum immediately on the blood coagulating, and thus have within them a fluid foreign to their healthy constitution.

The difficulties which I have here shown to exist in obtaining a correct analysis of the blood will serve to impress you with the great importance of an acquaintance with physical structure on the part of those who would apply chemistry to the service of physiology. It is, indeed, not only difficult for one who does not combine these two branches of inquiry to make useful observations in the service of either science as applied to the study of the blood, but it is a matter of impossibility for any one exclusively devoted to either pursuit even to determine the point at which physical methods of examination should terminate, and chemical analysis commence. I cannot do better on this occasion than quote the error already alluded to, which has been made by almost every chemist of the day, in considering the corpuscles of the blood as hæmotosine, whereas they are really organised structures, containing hæmotosine as one of their constituents; for though their weight, correctly ascertained, must bear some comparative relation to the quantity of hæmotosine present, still that which has been presumed by the chemist to be red colouring matter has really in great part been composed of white albuminous matter, viz. envelope and nucleus.

Had the physical structure of the blood been better understood, these errors might have been avoided, and it is to be hoped the time is not far distant when our knowledge will enable us to devise some more perfect method of analysis.

This want of knowledge of physical structure has greatly interfered with our possessing correct information as to the chemical characters of hæmotosine; or the red colouring principle, in its natural state; the processes recommended for its preparation betraying on the part of those who have proposed them a great deficiency in this respect. It is not long since, that, in order to separate hæmotosine, Lecanu recommended that the blood should be mixed with sulphuric acid as a first step in the process; thus embarrassing the result with the products of the action of that acid on the envelope of the corpuscle, which must of necessity be burst or dissolved before the red colouring principle can be attacked; nor can we then obtain what we desire, viz. hæmotosine in solution, free from the action of any

reagent, and in the condition in which it existed in the circulation. Had we attained our present degree of acquaintance with the anatomy of the blood-corpuscle when the examination of the blood was first pursued by chemists, our knowledge of the colouring principle would have been greatly in advance of its present position; and I will proceed to show how we now have the means of examining the soluble coloured contents of the corpuscle freed from extraneous matters, and probably much in the condition in which it existed in the circulation. The success of this method of extraction depends entirely on those physical properties of the corpuscle to which I have called attention.

We first proceed to obtain the corpuscles in a pure state, and washed clean from the solution of animal matters in which they float. You now know that this can be effected by pouring freshly drawn blood into a solution which has a specific gravity the same as that of the liquor sanguinis, and which will therefore allow the corpuscles to subside in a mass freed from a considerable portion of the albuminous liquid in which they floated.

This solution into which the blood is to be drawn may be made with salt and water, or sugar and water, the principal object being to obtain it of the same specific gravity as the liquor sanguinis. The corpuscles having subsided through this, and collected as a precipitate, for which purpose a period of rest should be allowed, we are to pour off the supernatant liquid, and again pour some more of the solution of sugar or salt upon the corpuscles, allow these to subside, again pour off, and so on till all the albuminous liquor is removed by the washings. We now have the corpuscles in a form which admits of their being exposed to solution, and which we effect by pouring them as a subsided precipitate into a vessel of distilled water. This breaks their cases by rapid endosmosis, and dissolves the colouring matter contained within. If this mixture be set aside we shall now perceive the white stratum of envelopes and nuclei, which I have before described, forming as a precipitate, while the supernatant liquor is of a bright clear red colour, and is composed of hæmatosine, dissolved in water, and, consequently, presented to us in a favourable condition for examination.

The pure state in which we are enabled to obtain hæmatosine by this plan of operating affords us an excellent opportunity of ascertaining whether the iron contained in the red corpuscle is a component of the hæmatosine, or of the envelope and nucleus; and I may state that careful examination has persuaded me that the whole of the iron of the blood is contained in this red colouring principle, while the nucleus and envelope do

not present the slightest trace of it; and this is a matter of some importance, for though some operators have succeeded in extracting iron from the hæmatosine without interfering with its red colour, it does not the less follow that hæmatosine needs the iron, with which in nature it is always combined, to discharge the offices assigned to it; nor does it follow, because these chemists have obtained a red coloured matter from hæmatosine, that such red coloured matter is the same as the hæmatosine existing in the blood; everything, indeed, that we know, would tend to disprove the correctness of such an idea.

I will here direct your attention to the respiratory function in connection with the red colouring matter of the blood, as it is a subject which has lately much attracted the attention of physiologists. It has been considered by some that several of the facts discovered of late years by experimenters on hæmatosine have tended to cast doubt on its powers as an attractor of oxygen during the respiratory process, and Professor Mûlder has lately altogether discountenanced the idea of hæmatosine changing in character during respiration, but regards it of a similar constitution in arterial and venous blood, explaining the change of colour observed in the blood during its passage through the lungs, and consequent exposure to air, to a change in the form of the corpuscles, and also in part to their becoming clothed with a layer of oxide of protein, which renders them opaque and milky, and, at the same time, renders them of biconcave form by contracting the edge of each surface. This physiologist has stated that solutions of salt render the coagulum of blood of a bright red colour by exosmosing their contents, and thus making them assume the biconcave form, and further states, that when corpuscles are endosmosed and assume the convex form, the colour of the coagulum is darkened in virtue of this opposite condition. This latter state, he says, is brought about if we wash in water the coagulum we have rendered bright by means of salt. Now it is a matter of fact that solutions of salt will act on the corpuscles and produce endosmotic currents, but, unfortunately for the theory above noticed, it matters not whether such solutions endosmose or exosmose the corpuscle, for in both cases they render the coagulum to which they are added of a bright red colour. The rest of this view, which relates to the formation of a milky incrustation of oxyprotein, is purely hypothetical. It is probable that Mûlder never examined the condition of corpuscles reddened by solutions of salt of low specific gravity, for had he done so he would at once have perceived that the rounded form of corpuscles of which he speaks as productive of the dark colour of the coagulum, might

be presented by the corpuscles of a coagulum which possessed a bright arterial tint. One of Mùlder's experiments already alluded to consists in washing with water a coagulum reddened by a solution of chloride of sodium, which, he says, changes its colour to black, by altering the form of its corpuscles from biconcave to convex. You now, from the experiments detailed in my last lecture, know that this washing will break all the reddened corpuscles on the surface, and make them discharge their colouring matter, and so expose the layer of corpuscles beneath, which are dark in colour, owing to not having been acted on, and these have been mistaken for the bright red corpuscles altered by water and changed in colour. Now since change of form can be produced without varying the colour of blood, and as, in fact, the very organization of the corpuscles prevents the possibility of their assuming any but the biconcave form in a fluid of the specific gravity of serum, and as in this fluid they are frequently and commonly known to assume either a vermilion red tint, or a dark colour, according as they are exposed to air or not, we have every reason to believe that these dark and bright red colours depend on changes in the colouring matter, and not on other than chemical conditions. If change of form in the corpuscle were sufficient to account for the change of venous to arterial blood, and this change consisted in the assumption of the biconcave form on the part of the corpuscle, we ought to find, on adding to blood reddened in colour by exposure to air, a solution of chloride of sodium of low specific gravity, and such as would tend to fill out the corpuscles—that the arterial tint would be deadened and made to assume the venous colour, but so far from this being the case, a clot rendered of a bright red hue by exposure to air is still more heightened in colour by the addition of a solution of salt of a specific gravity, which tends to swell out and not to collapse the corpuscles. In these considerations I have allowed, for argument's sake, that strong solutions of salt render the blood-corpuscles of a biconcave form; but this is not by any means the case, as under this influence they become quite empty and flaccid, losing all capability of assuming a form well calculated for the reflection of light, a property which Mùlder ascribes to them under such conditions.

I have not yet fully described to you the hypothesis on which Mùlder accounts for the arterialization of the blood, and the manner in which the absorption of oxygen assists in the production of a scarlet colour. As I stated before, this is, according to his view, an optical phenomenon, and it occurs as follows. During the passage of the venous blood through the lungs, oxygen is absorbed

by the liquor sanguinis, and an oxide of protein formed, which produces on each corpuscle a kind of buffy coat; this buffy coat then contracts, and, becoming puckered at its edges, draws the upper and lower halves of the corpuscles further from each other at the circumference, and thus produces the biconcave form in virtue of which the arterial tint appears as an optical effect. The whole of this is assumption, nor has any part of the hypothesis been supported by any appeal to microscopical or chemical evidence. Let us, on the other hand, remember what we know of the action of colouring matters generally on oxygen, and the many cases we are aware of in which oxygen is rapidly absorbed by coloured substances in the vegetable kingdom, and where a change of their colour is the consequence. The absorbing action of guaiacum is a familiar instance, and one which shows a close analogy to that of hæmatosine.

I have entered thus far into this subject, in order to show what grievous errors an ignorance of minute structure, and neglect of microscopical methods of examination, will lead to, even in those the best fitted to treat of the chemistry of animal bodies. A single moment's examination of blood rendered bright red by a strong solution of salt, would have shown Mùlder a shrivelled and deformed set of corpuscles, instead of the biconcave reflecting bodies he has spoken of.

I have before drawn your attention to the subject of chylification, and the manner in which I believe the chyle contributes the iron it holds in solution to the red colouring matter contained within the blood corpuscle, in order to supply it with that ingredient. Having so far entered on the question of nutrition, I must beg your indulgence while I advert to the question of genesis, and explain some views which I have been led to entertain on this subject, by considering the results I have obtained from microscopic examination of the blood under various conditions. Physiologists are at present at a loss to understand in what part of the system the red corpuscles are generated. The red colouring principle is not to be detected in the lymph, and those who have found traces of it in the chyle would not have done so had they collected the fluid quickly from the thoracic duct, such admixture of corpuscles being purely accidental, and caused by the absorbent action of the divided capillaries on the blood extravasated during the operations necessary for opening the animal. I have frequently obtained chyle perfectly white, and noticed that it became red in the thoracic duct only under the circumstances of extravasation and capillary absorption above noticed. It becomes a question, then, of some importance, to determine the manner in which the red corpuscles are produced,

since they do not appear as coloured bodies, or constituents either of chyle or lymph, nor does microscopical examination show us anything in either fluid at all resembling them in physical characters. Some experiments which I lately made in conjunction with my friend Mr. Samuel Lanc, have, I think, tended to throw considerable light upon this question; and I will proceed to detail the results we obtained, and the plan adopted to test them. The blood, as it is examined ordinarily, between glass and mica, though it is thus preserved in a fluid state for a considerable length of time, is always at a lower temperature than that which it possesses while circulating, and it was therefore to be concluded that under such a condition the actions connected with the nutrition or production of the corpuscle would, in all probability, be interfered with, or entirely suspended.

In order, then, to view the blood as nearly as possible under the conditions it presents while circulating, a specimen freshly drawn was placed under the microscope between glass and mica, and resting upon a bottle of transparent glass filled with water at a temperature of about 110° Fah. By this contrivance the corpuscles could still be viewed as transparent objects, and be kept at a temperature approaching blood-heat, occasionally, perhaps, becoming warmed somewhat beyond 98° or 100°, though this rarely happened, since the metallic fittings of the microscope very rapidly abstracted heat from the bottle. When the corpuscles were examined in this manner, a view was obtained quite different from any that we had before seen. The corpuscles assumed an hour-glass form, in some cases the contraction occurring not in the centre of the corpuscle, but, if the heat was continued, in all cases eventually dividing them into two circular bodies, the one generally being considerably smaller than the other. If the heat was continued for a sufficient length of time, the specimens no longer in any way presented the appearance of blood corpuscles, but having all become divided, the field of the microscope was covered with a multitude of small bodies, the result of the division of the normal blood-corpuscle, as usually seen and described. Now, in order to convince myself that heat had quite completed this division, I examined the resulting small corpuscles by the addition of a strong saline solution, and found that they underwent the changes of exosmosis precisely as I have shown it to occur with the blood corpuscles in their natural state. They seemed, in fact, blood corpuscles produced by division. The next step in this inquiry consisted in examining the blood after violent exercise, when the animal temperature had been increased considerably, and for some

length of time; and on several occasions, when I had opportunities of making such observations, I was enabled to detect a change in the corpuscles very nearly approaching in character to that I have described to occur as the effect of heat artificially applied. Taking these circumstances into consideration, I must confess I am greatly disposed to believe that the blood corpuscles multiply by division; an opinion I consider much strengthened by the fact that the chyle enters the corpuscle to nourish it, and to supply it with iron, but does not appear to contain any organized structure likely to assist in the formation of so complex an organ. The formation of hæmotosine, according to this theory, must occur within the envelope, and in all probability be the result of admixture of chyle with its contents. If we reflect on the results which will follow when this division of the corpuscles has taken place, the first, and perhaps the most important change, is that of their physical condition. We must remember that each corpuscle has now become divided, and that the two masses present a larger surface than they afforded when united in one, and that consequently a larger surface of hæmotosine is exposed to the action of air than was before the case, and more oxygen is therefore attracted into the system. The important bearings of this subject can, perhaps, be but imperfectly appreciated in the present state of our knowledge; we have sufficient data only to show us the rich field for observation that lies before us, and thought is early arrested in threading the intricate windings of the attractive inquiry.

Among the actions of the organism there appears, then, to be an increased attraction of oxygen occurring as the result of the division of the corpuscles of the blood; this absorbed oxygen doubtless contributes to the production of animal heat, and this heat, again, would seem to produce the division of corpuscles. The intermediate links of action associating these phenomena are those of digestion and chylofication. The oxygen attracted will not produce animal heat unless ingesta of a fitting character be exhibited, and unless the chylopoietic organs are in health. Here our subject diverges into many channels of inquiry interesting enough in themselves. To revert, however, to our more immediate object, we now know how necessary it is that the proportion of water contained in the blood should be subject to strict regulation in order that the mechanical results of endosmosis may occur in proper order and proportion for the nutrition of the corpuscle. We must remember that the evils attending the watery degeneration of the liquor sanguinis are both chemical and mechanical: in the

first place, the corpuscles, for reasons which I shall hereafter state, cannot undergo the changes necessary for the production of hæmotosine when they are distended; and secondly, when so filled with fluid they will not circulate freely in those capillaries through which they could before easily pass. These two effects of degeneration from excess of water will be thought sufficiently grave in character, when we remember the important part played by oxygen in the functions of the animal body, since when they are produced together, which is almost sure to be the case, we have a double obstacle afforded to the passage of oxygen as it is contained in the corpuscle through the capillary circulation.

Having considered the genesis of the corpuscles, it becomes a matter of interest to determine the manner in which those bodies are disposed of when worn out, and no longer capable of discharging their wonted functions.

Presuming the old corpuscles to become disintegrated, we must expect either that the debris will exist floating in the liquor sanguinis, or that solution of the nuclei and envelopes will take place, and that they will mix with the colouring matter in the liquor sanguinis. I have stated in my last lecture that if serum be largely diluted with water, we obtain a precipitate, and this precipitate I may now describe as showing, on microscopical examination, a very close approximation in character to that which we can obtain by artificially bursting the blood corpuscles by water, and allowing the debris to subside, and I feel some confidence in the opinion that this is its true character—that it is, in fact, composed of the envelopes and nuclei of the old corpuscles disintegrated.

It will be remembered by those who have studied the chemical history of the blood, that several experimenters have detected traces of iron in the serum. The view I have given of the distribution of the old and broken corpuscles is quite in accordance with the occasional presence of iron in this fluid, and the metal has, in all probability, occurred as an ingredient of the extravasated colouring matter of the blood, and been detected in the serum of specimens in which the destruction of the corpuscles was occurring with an unhealthy degree of rapidity. When blood is viewed under the microscope, we not unfrequently observe bodies on the field to which we are at a loss to ascribe distinctive characters. At one time we may perceive granular forms, at another elongated bodies nearly transparent, and, when once seen, only again to be brought into view by careful adjustment of the instrument. After violent exercise, these bodies are more easily observed, existing then in considerable numbers; indeed, so

much so as to force themselves upon the attention of the observers. These appearances I believe to be due to the presence of debris of worn-out corpuscles, and the increase observed after violent exercise appears to favour this view.

I have now described the anatomy of the corpuscle, noticed its physical attributes, and described that which I believe to be its mode of genesis and destruction.

DR. LEE'S

CORRECTION OF SOME MISSTATEMENTS RESPECTING THE PLACENTA, MENSTRUATION, AND THE CORPUS LUTEUM.

To the Editor of the Medical Gazette.

SIR,

In a recent number of your journal it has been imputed to me that being aware of a scientific error into which I had fallen, in common with several other anatomists, I had not acknowledged it. I shall feel obliged by your inserting the following extract from my published lectures, p. 135, to prove that this accusation is absolutely false.

“The repeated examination of the uterus and placenta in their natural state, under water, and when the uterine vessels were filled with injection, having led to no conclusive and satisfactory results respecting the connection of the placenta and uterus, it occurred to me, soon after the publication of my paper in the *Philosophical Transactions*, in 1832, that the most likely means of discovering the real connection of these parts would be to examine the placenta when the vessels of the uterus were filled with their blood, and coagulated. On the 24th May, 1833, such an opportunity presented itself through the kindness of Mr. Girdwood, of Paddington, and that no doubt might exist in the minds of anatomists as to the accuracy of the description, I requested Mr. Lawrence carefully to examine the parts with me, and draw up an account of the appearances which we observed. It was my wish immediately to have published the memorandum containing an account of these results, but I was dissuaded from doing so by Mr. Lawrence, who thought it better to wait until another opportunity should occur of verifying the observation, and still further elucidating the subject. The facts were, however, immediately made known to Sir Astley Cooper, Professor Owen, Mr. Mayo, and many other members of the profession who felt interested on the subject, and they were thus stated about a month after in the review of Velpeau's *Embryology* in the *MEDICAL GAZETTE*. ‘About a month ago, before

the preparation at the College of Surgeons was examined by Messrs. Stanley and Mayo, we understand that Dr. Robert Lee, in order as far as possible to obviate every fallacy, examined a gravid uterus in the eighth month, in which he had previously coagulated the maternal blood. He was able to satisfy himself and Mr. Lawrence, who was present at the examination, that coagula of the maternal blood extended from some of the openings in the lining membrane of the uterus into canals formed by the deciduous membrane on the margin of the placenta. These vessels or channels in the decidua could be traced only a short distance along the margin of the placenta and between the lobes."

It has likewise been falsely imputed to me that I have attempted to appropriate to myself the theory of menstruation by Dr. Power. The following extract from my paper on the Diseases of the Ovaria, published on the 1st April, 1833, in the *Cyclopædia of Practical Medicine*, will show that this accusation is also groundless.

"Dr. Power has likewise conjectured that an ovum escaping from the ovary at every monthly period is the cause of menstruation, which he has defined to be 'an imperfect or disappointed action of the uterus in the formation of the membrane (decidua) which is requisite for its connexion with the impregnated ovum.' This hypothesis does not appear to have been formed from actual observations on the ovaria during menstruation, as Dr. Power has made no allusion to these in his work, and does not state that he has ever examined the body of any individual who died with the menses upon her. That an ovum, by which is usually meant an embryo enveloped in membranes, does not pass from the ovary during menstruation, is evident from the fact that an ovum is never formed but as a consequence of impregnation, and that conception does not take place at the menstrual period. The facts which have now been related render it, however, extremely probable that all the phenomena of menstruation are dependent upon, or are connected with, some peculiar changes in the Graafian vesicles, in consequence of which an opening is formed in their peritoneal and proper coats. Whether an entire vesicle, or only the fluid it contains, escapes through the opening at the period of menstruation, further observations may hereafter determine. There is no proof whatever that an ovum passes along the fallopian tube into the uterus during menstruation, and it is not clearly established that this takes place even subsequent to conception."

Surely, after having published these observations, expressing the strongest doubts of the

truth of Dr. Power's hypothesis, I could never have attempted to appropriate to myself as my own his theory of menstruation, nor claimed the illustration of that theory. No such attempt was ever made by me, nor did it ever enter my imagination to do so. To Dr. Girdwood, of London, Dr. Paterson's relative, belongs unquestionably the undivided honour of claiming the illustration of Dr. Power's theory.

Dr. Craigie has been led to make an erroneous statement in the same number of the *MEDICAL GAZETTE*. He says, "I have examined the originals of all the letters which were addressed by Dr. Lee to Dr. Bowman and Dr. Paterson on the subject of the corpus luteum, submitted by Dr. Bowman, in May, 1844, to Dr. Lee, for examination, and which letters, excepting two to be afterwards specified, were published in the 161st, or October number, of the *Edinburgh Medical and Surgical Journal*, and the following I find to be the result. The letters are *eight* in number." The number was ten, and not eight, as here stated by Dr. Craigie; there were three to Dr. Paterson, and seven to Dr. Bowman. The following are the dates of these seven letters to Dr. Bowman:—

1. 13th May, 1844.
2. 22d June —
3. 26th June —
4. 30th July —
5. 6th Aug. —
6. 8th Aug. —
7. 24th Aug. —

Dr. Craigie has made no allusion to the two last of these seven letters, and was, I must believe, kept in total ignorance respecting them. From whatever cause, however it has arisen, there can be no doubt that his statement is erroneous, and there can now be no difficulty in explaining why these letters were not published in the mutilated correspondence in the *Edinburgh Medical and Surgical Journal*, and why Dr. Craigie was not permitted to see them. They are as follows;—

4, Saville Row, 8th August, 1844.

My dear sir,—I have again to request that you will by return of post inform me whether you did not receive from me more than two letters relating to the preparation in question. The dates are of no importance, but it is of the greatest that I should receive a positive answer to my simple question. You cannot fail to remember the number of my letters.—I remain, dear sir, faithfully yours,

Dr. Bowman.

ROBERT LEE.

In reply to this letter, Dr. Bowman states on the following day, the 9th August: "*Dr. Paterson has all your letters referring to the preparation in his possession,*

and my memory will not allow me to speak positively.' On the 10th, it will be seen below that Dr. Bowman's memory was restored to him.

The following is the last letter addressed by me to Dr. Bowman, and was suppressed. It will be seen that it contains a distinct request to be informed respecting the fate of my first letter.

4, Saville Row, 24th August, 1844.

My dear sir,—You have now had abundance of time to refresh your memory, and can tell me no doubt everything respecting the *first* letter I wrote to you, and whether it was impounded at Monkwearmouth, or actually sent forward to Leith, as you stated in a former letter. Your friend in the north threatens to publish the correspondence between you and me. I hope you will take care before he does so that my *first* letter is forthcoming, and that it is published with the others. Truth has nothing to fear. A man who conscientiously tells the truth has only to go on in his course, but a man who departs from the truth has every thing to dread.

Mr. Dodd will again soon call upon you to receive from you those explanations which are evidently required to clear your character from the suspicions under which it must lie until you reveal all the circumstances connected with this affair. Your first letter to me led me to form a very favourable opinion of your candour and integrity. I pray that my good opinion of you may continue unchanged.—I remain, &c.

ROBERT LEE.

Dr. Bowman.

It is now proved, that four letters written by me to Dr. Bowman were suppressed by Dr. Paterson in the correspondence which he published in the *Edinburgh Medical and Surgical Journal*. Dr. Paterson's apology for suppressing the first of these letters, for denying its existence when actually in his possession, and then acknowledging its existence but withholding a copy from me, is contained in the following words. "It is necessary for me," he says, "to add a few words regarding the letter of the 13th of May, about which Dr. Lee has said so much. Dr. Lee states that no copy of it was sent to him. Its date, however, was forwarded to him, and the general tenor of its contents, as well as the fact that it contained no opinion on the preparation. Dr. Lee, possessed of this information, still writes for a letter between the 13th and 22d May, a letter which had no existence. He now, however, says that it was the letter of the 13th May that he all along wanted. To my mind it appears, that had Dr. Lee wanted a copy of his letter of the 13th May, (with the date and tenor of which he had already been furnished) he would have writ-

ten for it, but, instead, he asks for one between the 13th and 22d May, and yet now says that it was the letter of the 13th that he referred to. Such conduct appears to me inexplicable, and I leave the reader to draw his own inferences regarding it."

A perusal of the following letters, and a comparison of their dates, will at once expose the entire falsehood of this statement.

It will be seen that I was *not* in possession of the information respecting my letter of the 13th May, when the first two of the following letters were written.

Saville Row, 6th August, 1844.

My dear sir,—Will you have the kindness to inform me by return of post whether or not you received a letter from me respecting the preparation of the corpus luteum, between the 13th and the 22d of May.—I remain, yours very truly,

ROBERT LEE.

Dr. Bowman.

London, 4, Saville Row, 5th Aug. 1844.

Dear sir,—I wrote another letter to Dr. Bowman, before the 22d May, 1844, of which you have not forwarded a copy to me. I am much obliged to you for the copies of the *two* you have sent, and I trust you will feel entirely satisfied with the account which Mr. Wharton Jones will give in the next number of the *Medical Gazette* of his microscopic examination of the body in question.—I remain, dear sir, very faithfully yours,

ROBERT LEE.

To Dr. Paterson.

Leith, 10th August, 1844.

Dear sir,—I beg to acknowledge the receipt of your letter dated August 5th, which would have been replied to sooner, had it not been that I expected, ere this, to have heard from Dr. Bowman in answer to a letter sent to him immediately after the receipt of yours. You *accuse* me of having kept a letter which you wrote to Dr. Bowman, of a previous date to those copies of which were sent to you. In reply to this *accusation*, I have to state that I never received any letter of yours from Dr. Bowman of a prior date to those the copies of which were sent you. In addition, you make no reference to a previous letter in the first one I received of the 22d May, and I am convinced, that, had any previous letter arrived, such would have been immediately communicated to me by Dr. Bowman. As soon, however, as I receive an answer from Dr. B. I will write to you.

I shall be glad if Mr. Jones's statement of the question in dispute between us shall be satisfactory to me.—I have the honour to remain, your obedient servant,

ROBERT PATERSON.

Dr. Robert Lee, London.

No explanation has yet been given of the falsehood contained in this letter.

Leith, 12th August, 1844.

Dear sir,—I presume that you will by this time have heard from Dr. Bowman himself regarding the number of your letters to him. I may state, however, that they were three in number. The *first*, dated May 13, acknowledges your receipt of the preparation; the *second*, dated May 22, contains your opinions regarding it; and the *third*, dated June 26, accompanies the return of it. These, Dr. Bowman distinctly states, were the only letters received from you in connexion with the preparation sent you.

I have just seen Mr. Jones's description of the preparation, and more especially of the corpus luteum in question, in the *Gazette of Saturday last*. It contains one or two most important errors, which it will be necessary to have corrected. Before doing so, however, I am anxious to know if Mr. Jones's letter contains all the statements you propose to make public regarding your unjust criticisms on the case, and as more especially stated by me in a former letter.

I shall feel obliged by your communicating to me, with your earliest convenience, if any further statement on the subject is to be made public.—I have the honour to remain, your obedient servant,

ROBERT PATERSON.

Dr. Robert Lee, London.

It will be seen that in this letter there is not a word said respecting the tenor of my letter of the 13th May, "nor is the fact mentioned that it contained no opinion respecting the preparation." What it did contain of importance is, however, entirely omitted.

Another false statement, made in the same number of your journal, is, that "Dr. Lee has thus first violated his written promise by not publishing a confession of his error in the pages of the *Medical Gazette*." No such written or verbal promise was given by me; "I shall feel the greatest pleasure," I said, "in communicating to the *Medical Gazette* the grounds upon which I was led to conclude that it was a true corpus luteum which was submitted to me by Dr. Bowman. Before, however, doing this, and complying with the request contained in your letter, it will be necessary for me carefully to examine your description of this body in the *Edinburgh Medical and Surgical Journal*." The publication of Mr. Wharton Jones's microscopical report fulfilled what was here promised, and the examination led to the discovery that if the ovary sent to me from Monkwearmouth were the ovary of the lamplighter's wife (which several distinguished anatomists still greatly doubt), Dr. Paterson's description of it in the *Edinburgh Medical and Surgical Journal* was nothing but a mass of error*.

* The preparation of the uterus and appen-

"I may state once for all," says Dr. Paterson, "in reply to various charges which Dr. Lee makes in the communication referred to, that Dr. Bowman, who sent the preparation to him, *knew nothing whatever* of its history until after Dr. Lee's opinion of it was delivered, and that the preparation itself was taken out of a preparation jar, where it had been preserved in spirits, wrapped up in clean linen rags steeped in spirits, and put into a tin canister, to enable it to be sent through the post. In this way it must have reached Dr. Lee, for it was never even opened at Monkwearmouth."

Let the reader compare this with the following letter from Dr. Bowman to me, and observe the unenviable position in which these two individuals are placed by their contradictory statements. Will Dr. Bowman produce the correspondence which had previously taken place between him and Dr. Paterson, and thus vindicate his character from this direct attack upon his veracity? There is no man who will believe in Dr. Bowman's innocence until the whole of the letters which passed between him and Dr. Paterson before the 27th of May are openly produced, nor will any man place the slightest reliance on the preceding statement made by Dr. Paterson until this has been done.

Monkwearmouth, 27th May.

My dear sir,—I feel exceedingly obliged and grateful for the attention and trouble you have taken in examining and giving me your opinion of the preparation I took the liberty of forwarding to you. It is very gratifying to me that you, whose opinion bears such weight in the medical world,

dages of the lamplighter's wife belonged originally to Dr. Simpson, Professor of Midwifery in the University of Edinburgh. On the 9th Nov., 1844, I sent to Dr. Simpson a copy of my last Paper on the Structure of the Corpus Luteum, and its Value as a Test of Early Pregnancy, (*MEDICAL GAZETTE*) with the following note. "It appears that the preparation referred to in the accompanying paper belongs to you. Were you aware for what purpose it was to be used when you gave it out of your possession into Dr. Paterson's hands, to be sent surreptitiously to me by W. O. Bowman, M.D. Monkwearmouth?" Dr. Simpson stated in reply, that two years ago he had given the preparation to a gentleman who set a higher value upon it than he did, in consequence of the uterus containing a beautiful decidua. As there was no decidua in the uterus sent to me from Monkwearmouth, it is now very necessary that the members of the profession should hear something further respecting this part of the preparation. Dr. Simpson would gratify the wishes of many who have taken an interest in this discussion, if he would not merely name the gentleman to whom he gave the preparation—the present possessor of this beautiful decidua—but name those, if he is able, through whose hands the preparation has passed during the last two years. He would gratify them still more by stating if he knows who the professional friends were who advised Dr. Paterson to adopt the stealthy plan of getting a candid opinion.

should have come to the same conclusion *I had already formed*, namely, that it is a true corpus luteum.

I have communicated with my friend, who will be happy to let you retain the half of the ovary as you request, but as he has some intention of publishing the case at some future period, he would wish you to return the remainder as soon as convenient.

I take this opportunity of returning you my sincere thanks for your kindness and attention.—I have the honour to be, your obedient servant,
H. O. BOWMAN.

Dr. Lee.

The author of the preceding ignorant and unfounded imputations, who, on the 9th May, 1844, expressed the "highest confidence in my opinion," thus expressed himself in your journal on the 14th February, 1845:—"I feel that I owe a statement by way of apology to my professional brethren for the means which I adopted to procure the delivery of a candid opinion on the preparation in dispute from Dr. Lee; for the following reasons I considered myself justified in having recourse to a plan with Dr. Lee that I never would have had recourse to with any other member of the profession." The "highest confidence in my opinion," entertained on the 9th May, 1844, suddenly vanished, when it was unexpectedly discovered that I had detected the truth, though most artfully concealed, and that the gross deception which had been practised would be completely baffled and exposed. The panegyric and the attack are held in the same estimation by me, and I know that they are held so by all the honourable members of the medical profession.

The importance of a knowledge of the structure of the corpus luteum, and of the distinction between true and false corpora lutea in medico-legal inquiries, cannot, I conceive, be better illustrated than by the report of what took place at the Medical Society of London, on the 3d February last, which was published in the *Lancet*, March 1, 1845, p. 245.—I am, sir,

Your obedient servant,

ROBERT LEE.

4, Saville Row, March 14, 1845.

EMPALEMENT,

(CAUSED BY AN IRON SPINDLE PENETRATING THE LEFT BUTTOCK, AND COMING OUT BY THE RIGHT OF THE NAVEL,)

WITHOUT VISCERAL INJURY.

By M. BESSEMS.

A LAD, aged 14 years, of middle stature, working with his father, a silk winder, got up upon a bed about four feet high; at the side there happened to be a wooden block

into which were inserted by their handles, at some distance apart, two axes of the reel, iron spindles, blunt at the point, a foot long, and of the thickness of a large quill.

In this dangerous position his left foot slipped and he fell. After the fall, during which he experienced no particular pain, his body was inclined forwards and to the left, supported by the left shoulder resting against the wall and by the feet upon the ground; the thighs were slightly bent upon the pelvis.

On attempting to rise he felt himself pinned by the buttock, at the same time perceived with surprise rather than fright one of the axes protruding from the belly at the side of the navel, having moreover perforated in this situation his shirt and trousers. Maintaining remarkable *sang-froid*, he detached the axis of the block, and thus transfixed, walked down about a dozen steps of a staircase to call his mother, who pulled out the spindle, and then waited the arrival of a surgeon.

The axis acquired only a slight curvature at the line of junction with the handle.

At his admission into the hospital three days after the accident, this patient presented merely two small round wounds; one on the anterior wall of the abdomen about three-quarters of an inch to the right of the navel, in the direction of a line drawn from thence to the anterior superior iliac spine; the other in the fold of the left buttock about two and a half fingers' breadth from the anus. These two wounds, surrounded by a reddish circle, furnished a slight exudation.

The pain, which the preceding evening had been vague and radiating over the whole abdomen, was, on admission, very trifling, and confined to the margin of the front wound. Otherwise there was no morbid symptom; the belly was supple; appetite, digestion, stools, and urine, natural; not the least febrile reaction.

This favourable condition lasted up to the period of the patient's dismissal, twenty days after the casualty.

It would appear in this case that the spindle after penetrating the left buttock at two and a half fingers' breadths from the anus, must have traversed diagonally from below upwards the left half of the pelvic hollow and a part of the abdominal cavity in order to have forced a way out by the right of the navel. The anatomical disposition of the peritoneum is such that in this course the spindle must have necessarily rent this serous sac. Yet, this lesion, reputed so serious by surgical writers, was not followed by any mischief.

Another remarkable particular connected with the above fact is the absence of visceral

injury. If it be reckoned that during the vertical position in which the lad was when the thing occurred, the intestinal convolutions must have filled the entire pelvic cavity, it is difficult to conceive how an iron spindle could have passed through this cavity amid the convolutions without doing any hurt.

The blunt point of the instrument and the round lubricous conformation of the bowels, are apparently the circumstances to which so fortunate a result may be ascribed.—*Annales de la Société de Médecine d'Anvers*, Janvier 1845. p. 43.

The manipulation of turning was easily accomplished, the waters not having come away.

The womb retained after delivery, at its upper margin, a certain depression, which made the angles more marked than this margin forms in uniting with the lateral margins, proving the persistence of the deformity in the empty state of that viscus.—*Annales de la Société d'Anvers*, Février 1845, p. 89.

COLON STRANGULATED BY THE MESO-COLON.

SINGULAR DEFORMITY OF THE WOMB, INDUCING ARM PRESENTATION OF THE CHILD IN THREE CONSECUTIVE LABOURS.

BY DR LECLUYSE.

CALLED the 4th of August, 1844, to a third labour, in the instance of a woman of small stature, whose first two deliveries had required the turning of the child on account of the arm presenting, I was much surprised to find a recurrence of the same. I was unable at the moment to explain this frequency of transverse presentation, but on passing one hand over the abdomen while taking a pain with the other, the upper margin of the womb was felt so low and so near the pubis as to lead to the belief that this organ was only half developed, or, at all events, in a state of anteversion, or other faulty position.

Upon examining the abdomen more carefully, I ascertained that these suppositions were groundless; and it was only by comparing the little elevation of the womb with the great development of the flanks, that deformity of the organ of gestation could be surmised. In effect, the sides of the belly were evidently far more prominent than ordinary, and passed beyond the hips so as to cause a breadth which contrasted singularly with the small stature of the woman.

The womb, instead of being pyriform in the vertical sense, presented, as it were, a sort of ellipsoid, of which the extremities of the greater axis corresponded respectively to the centre of the flanks; it had thus gained in breadth what it lost in height. To this strange anomaly I would ascribe the frequency of the horizontal position of the fœtus, the greater diameter of the fœtal ovoid being in perfect parallelism with that of the elliptic cavity of the womb.

The genital parts were in other respects natural; the neck of the uterus alone seemed a little more raised, which might depend on the absence from pressure of some projecting portion of the child.

DR. GILMAN DAVIS, of Portland, Me., relates in the *Boston Medical and Surgical Journal*, (Dec. 11th, 1844,) an interesting case in which fatal strangulation of the colon in an aperture in the meso-colon occurred. The subject of the case was a gentleman, twenty-six years of age, who was attacked on the 13th Oct. 1843, with paroxysms of pain in the epigastric region, without tenderness; but with remarkable tonic rigidity of the abdominal muscles, and constipation. By the use of cathartics, enemata, and opiates, after three days suffering, evacuations were produced from the bowels, and the other symptoms then yielded.

The patient, except being troubled with constipation, enjoyed moderate health after this until the 5th of May, 1844, when he experienced an attack similar to the first. There was superadded to the previous symptoms, constant vomiting; every thing swallowed was instantly rejected. There was no thirst; the firmest pressure on the abdomen caused no pain; there was extreme restlessness and nervous agitation, and the patient complained that there was a stoppage in the epigastric region, and said he should feel better if he could only have an evacuation from his bowels. Various remedies were employed, without, however, the least benefit; the patient got worse and worse, and died midday, May 9th.

On *post-mortem* examination a large knuckle of intestine, of a deep port wine colour, composed of thirteen inches of the colon, was found strangulated in an aperture about the size of a quarter of a dollar in the meso-colon. From the strangulated intestine to its termination in the anus, measured four feet. The strangulated intestine was in a complete state of mortification. The aperture was round, with even edges. No reasonable conjecture could be formed as to the cause of its formation."—*American Journal of the Medical Sciences*.

MOVEMENT IN THE PROFESSION.

At a meeting of the medical profession of York, held upon the 19th inst., thanks were expressed to Sir James Graham for allowing ample opportunity of considering the new bill. Several of the alterations therein contained were fully approved. It was recommended that a clause be introduced, authorizing the representation of general practitioners in the Council of Health; that the Apothecaries' Act be entirely repealed. In the opinion of the meeting, the proposed measure will have a degrading influence upon the members of the College of Surgeons, by requiring them to register as licentiates in medicine and surgery; and the institution of a special instead of a general examination in midwifery will give rise to invidious distinctions. It was further suggested, that, in any charters granted to the Colleges of Physicians and Surgeons, corporate rights should be secured to all the members of the said Colleges, and that the fellowship be open to every member who shall have complied with the regulations, and passed the prescribed examinations; that it should be lawful for the same person to register as both physician and surgeon; and that a more summary mode of preventing illegal practice be ingrafted on the bill, than the one proposed in Clause 35.

Copies of protests against the proceedings of the Council of the College of Surgeons, in the matter of the fellowship, have reached us; one is from Manchester and Salford, another from West Somerset, and a third from Gloucestershire.

The following are the avowed sentiments of the National Association of General Practitioners in Medicine, Surgery, and Midwifery:—

"They require a College—They wish to build a College for themselves—They desire to have a Government on the representative principle, totally unshackled by the customs and laws of any city guild—to make their own bye-laws, to appoint their own examiners, and to be authorised by law to examine and certify as to competency to practise—not as apothecaries—not in medicine alone—but as general practitioners in medicine, surgery, and midwifery. They desire not to interfere with the College of Physicians, or College of Surgeons, but, on the contrary, to hold them in the same estimation they have ever done; but they protest against being rendered the mere offset, the mere licentiates of either College; they call for an independent incorporation, with equal rights and privileges, and to this they feel that their own and the public interest justly entitle them."

APOTHECARIES' HALL.

Gentlemen who have obtained Certificates, March 20.—Joseph Kaye, 31, Bedford St., Strand.—Arthur Charles Morse, Ealing, Middlesex.—Samuel Sumner Dyer, Ringwood, Hants.—Frank Hatchard, London.—James Taylor, Manchester.—George Vernon Driver, Lower Grosvenor Place.—Henry Pitt, Walsall.—Allan Major, Derby.

MORTALITY OF THE METROPOLIS.

Deaths from all causes registered in the week ending Saturday, March 15.

ALL CAUSES 1069
SPECIFIED CAUSES 1066

I.—Zymotic (Epidemic, Endemic, and Contagious) Diseases, 157; among which, of—

Small Pox	32
Measles	23
Scarlatina	23
Hoop-cough	39
Croup	10
Thrush	3
Diarrhoea	3
Dysentery	0
Cholera	0
Influenza	1
Typhus	21

II.—Dropsy, Cancer, and other Diseases of uncertain or variable Seat, 95; among which, of—

Inflammation	0
Dropsy	29
Scrofula	1
Cancer	13
Atrophy	11
Debility	24
Sudden Deaths	6

III.—Diseases of the Brain, Spinal Marrow, Nerves, and Senses, 179; among which, of—

Hydrocephalus	27
Apoplexy	33
Paralysis	25
Convulsions	62
Insanity	2
Delirium Tremens	2

IV.—Diseases of the Lungs, and of the other Organs of Respiration, 388; among which, of—

Pneumonia	101
Hydrothorax	11
Asthma	46
Phthisis or Consumption	166
Diseases of the Lungs, &c.	16
Diseases of Heart and Blood-vessels	40

V.—Diseases of the Stomach, Liver, and other Organs of Digestion, 73; among which, of—

Teething	16
Gastritis	0
Enteritis	16
Tabes	9
Hernia	2
Disease of Stomach, &c.	8
Disease of Liver, &c.	10
Diseases of the Kidneys, &c.	12

VII.—Childbirth, Diseases of the Uterus, &c. 11; among which, of—

Childbirth	9
Disease of Uterus	2

IX.—Rheumatism, Diseases of the Bones, Joints, &c.

.....	4
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X.—Diseases of Skin, Cellular Tissue, &c.

.....	1
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XI.—Old Age

.....	77
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XII.—Violence, Privation, Cold, and Intemperance

.....	29
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THE
LONDON MEDICAL GAZETTE,

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OF

Medicine and the Collateral Sciences.

FRIDAY, APRIL 4, 1845.

GULSTONIAN LECTURES,

Delivered at the Royal College of Physicians,

By G. OWEN REES, M.D. F.R.S.

Assistant-Physician to Guy's Hospital, and Physician to the Pentonville Prison.

HAVING, sir, had the honour, in two previous lectures, to draw your attention to the general chemistry and anatomy of the blood, I shall proceed on the present occasion to consider certain physiological and pathological conditions, having reference principally to the physical state of the fluid as affected by its dilution; the result of variation in the proportion of water entering into its constitution. I have already noticed the condition of the blood corpuscles as they circulated, and the equality in specific gravity between their fluid contents and that of the liquor sanguinis as the necessary result of stasis between fluids separated by membrane, which is the case with the red coloured liquor contained within the envelope, and the liquor sanguinis without. I have already shown that the addition to the liquor sanguinis of any solution which changes its specific gravity, when mixed with it out of the body, exerts on the blood corpuscles an immediate action, owing to the establishment of endosmotic currents through their membrane. I have also shown that these effects will vary according to the specific gravity of these saline or saccharine solutions, and that strong solutions always collapse the corpuscles, while weak solutions, on the contrary, always distend them. Now since there are large discharges of water constantly occurring during the various processes of excretion and secretion, connected with the healthy actions of the organism, and as this water must of necessity be supplied by the blood, it is a matter of some interest to ascertain whether or not the liquor sanguinis varies so greatly in its specific gravity at different times, and under varying condi-

tions, as to change the form of the corpuscle, and thus alter its relation to the blood-vessels or capillaries,—this being an important matter for the physiologist, and one which, if determined in the affirmative, may be expected to assist in throwing light on many questions of interest to those engaged in pathological inquiries. It was thought desirable, in order to determine this question, to take advantage of a condition under which a large discharge of water had occurred; and for this purpose the skin was chosen as the emunctory, its action being more easily and safely induced than that of any other of the excretory surfaces.

During the last summer I had opportunities of examining microscopically the blood of three young men immediately after they had partaken of violent exercise, and had perspired very freely, and in every case observed that the corpuscles were very much thinned, and presented the appearance assumed by those bodies when subjected to the action of solutions exceeding the liquor sanguinis in specific gravity. In fact, the liquor sanguinis had lost water through the cutaneous surface by transpiration, had therefore become increased in density, and acted upon the corpuscles in the circulation so as to exosmose their contents. It becomes now a matter for consideration to determine how these corpuscles again acquire their normal condition of stasis, and again become surrounded by a fluid of healthy specific gravity; but no great difficulty is in our way, for it is easy to imagine that the water supplied to the system, by gratifying the calls of urgent thirst, will rapidly find its way into the circulation, react on the corpuscles, and, by a series of endosmotic changes, rapidly reduce both them and the liquor sanguinis to the normal standard of density. There can indeed be but little doubt that this occurs, not only from what we know of the physical nature of the corpuscle, but also of the state of the blood in disease, to which I shall presently allude.

The return to the normal standard is doubtless rapidly effected in health; the stomach receives water into the system, and distributes it through the blood. The skin and kidney excrete water in large proportion, when it may have been detained from some accidental and casual cause in the circulation, or perhaps for some special object; and the lungs contribute in no small degree to the perfection of these oscillatory actions essential to health.

It may be as well to describe in this place the result of an experiment made on the living animal, having reference to the state of the blood corpuscles while circulating in the vessels, as it proved that they are subject to the same physical laws, while thus circumstanced, as when out of the body. In a former lecture, when describing the manner in which the blood corpuscles removed from the body became inflated according as fluids of high or low specific gravity were added to them, I spoke of the destructive action of water, which burst the cases of the corpuscles, by causing rapid endosmosis. Now the phenomena of collapse and distension may both be observed in the human subject; but it became necessary to perform an experiment on one of the lower animals, in order to determine whether blood corpuscles could be burst by the addition of water while circulating in the vessels. To solve this question the jugular of a healthy terrier was first laid bare, and about six ounces of blood drawn from it; this was set aside to coagulate. Six ounces of pure water were now thrown carefully into the circulation, after which the animal was allowed to rest for about five minutes. About six ounces more of blood were then drawn away, and set aside to coagulate, in order to compare it with that which had been drawn previous to the injection of water. Now, presuming the blood corpuscles to be burst by water in their natural condition circulating in the vessels, in the same manner as when removed from the body, the serum of blood, as obtained by the coagulation of that specimen drawn after the injection of water into the jugular had been made, ought to be sanguinolent, because the colouring matter which, in the natural state, is retained within the membrane of the corpuscle, would be dissolved throughout the liquor sanguinis, owing to the bursting of the membrane; and it would appear in the serum, as shown by its colour. Such a result was obtained; the specimen of blood drawn from the dog before the injection of the water was of its ordinary pale straw colour, while that drawn after the injection of water was strongly sanguinolent, that is, tinged by the red colouring matter of the corpuscles, proving that water had acted on those bodies while in the circulation precisely in the same

manner as when they are removed from the body. In fact, the endosmotic laws are in action during the circulation of the corpuscles even to the production of extreme effects.

It is, however, improbable that the destruction of the corpuscles by bursting, as the result of watery admixture, should ever occur as a pathological result; for even were it possible that the animal solutions with which the corpuscles might come in contact were degenerated so as nearly to approach the specific gravity of water, we must recollect that the pathological change leading to that state is a gradual one, and that consequently the contained fluid of the corpuscles will too nearly approach in specific gravity to the degenerated fluids, to occasion that rapid endosmosis which would cause the membranes of the corpuscles to burst. The specific gravity of the liquor sanguinis is doubtless maintained at the normal standard by the regulating power of the skin, lungs, and stomach, as exhalers and absorbers of water, in the healthy state of the body; but let us consider what we must expect if disease supervene, and these compensating actions are no longer capable of exerting their beneficial influence. If, from any cause, the watery part of the blood fail to pass off in healthy proportion, or if a similar condition be brought about by too abundant a discharge of the solid constituents of the liquor sanguinis, and the blood contain an excess of water in consequence, then the corpuscle will, by a continued contact with the degenerated fluid, necessarily have its contents lowered in specific gravity also, and the solution of hæmotosine contained within it will be abnormally dilute. But this is not all: we know that there are a set of changes which must necessarily occur between the chyle and the blood corpuscles in health, owing to the difference in specific gravity between that fluid and the contents of the blood corpuscles, and in virtue of which a large proportion of the chyle is permitted to enter through the membrane and mix within it. Now the chyle is of less specific gravity than the contents of the blood corpuscle in health; and the nearer the contents of the corpuscle approach to the specific gravity of the chyle, the less interchange will take place between the two fluids, in accordance with the endosmotic law, and the less iron will enter the corpuscle to assist in the formation of hæmotosine. Thus genesis and the nutrition of the corpuscles is interfered with, and the blood is totally deranged. From this watery degeneration, then, we have two evils arising: firstly, the solids are supplied with a dilute liquor sanguinis; and secondly, the corpuscles attract less oxygen into the system than in health, there being fewer of them, and those existing containing only a diluted hæmotosine.

Diseases characterized by excess of water in the blood, so far as we are at present acquainted with them, are productive of that expression of countenance to which the term anæmia has been applied. Now it is well known that anæmia can be produced not only by direct loss of blood, but by an excessive discharge of any fluid from the system which contains as an ingredient the solid matters of the blood; nor is it necessary that red corpuscles should form part of the discharge in order that this effect should be produced: long-continued leucorrhœa will occasion it; and the discharge of albumen with the urine is a fertile cause of anæmia. The anæmia which is produced by loss of blood is in all probability accompanied by absorption of water through the skin, an action which, did it not occur in severe floodings, would probably greatly increase the number of deaths by this disease. The extreme and distressing thirst observed in such cases indicates the necessity for the presence of water, the immediate use of which is probably to supply a bulk of fluid to replace the blood lost, and enable the heart to contract—to supply it, in fact, with something to contract upon. The thirst, arising as I have described, is frequently greatly relieved by the application of water to the surface. Sponging the skin at intervals with water has been found to allay this distressing symptom; and it appears from this fact more than probable that, under the conditions of system above alluded to, the skin becomes an active absorbent organ; and that the use of water, as applied to the surface, should be considered as a valuable remedial measure, directly influencing the heart, and not merely as a means of alleviating the symptom of thirst.

While on this subject I may perhaps be permitted to theorise on the manner in which hæmorrhage is occasionally restrained, or rather allude to the manner in which its suppression is probably assisted by the conformation and peculiarity of structure of the blood corpuscles. When large quantities of blood exude from the capillaries, and water is absorbed by the skin, and taken in by the stomach to satisfy thirst, the specific gravity of the liquor sanguinis must become lessened. The immediate effect of this will be, that the corpuscles of the blood become endosmosed and swollen; and this will take place in proportion varying directly as the rapidity and quantity of the flow of the blood lost. Corpuscles which could before circulate through capillary vessels, have now, owing to this endosmotic change, assumed a form and acquired a degree of hardness, *from mechanical distension*, which will preclude the possibility of their entering tubes of the same calibre as before; and the corpuscles,

the part of the blood immediately necessary to life, will thus be assisted in remaining in the circulation, and, moreover, will tend to exert a mechanical plugging action on the mouths of the bleeding vessels. In passive bleedings from mucous surfaces, it seems highly probable that the conditions I have described tend greatly to the preservation of life, by assisting in the suppression of hæmorrhage. We can by this theory also explain the excessive and persistent pallor occasionally noticed in anæmia; for the enlarged condition of the blood corpuscles will prevent their circulation in those capillaries of the skin and mucous surfaces which before they could readily permeate; and thus another immediate cause for the anæmiated skin is added to that arising from a positive deficiency in the number of corpuscles of the blood. In considering the remoter causes for anæmia, it would appear that the most common are those quite unconnected with hæmorrhage, in which, indeed, scarcely any of the entire blood is lost, but where the constituents of the liquor sanguinis only are allowed to escape in excess, either from mucous membranes, or the secreting surface of the kidney, in more than healthy proportion.

Among anæmiated patients we shall find a large number who have been, or are, the subjects of leucorrhœa, or some form of discharge which contains one or more of the proximate elements of the blood as an ingredient.

When the discharge which is the cause of anæmia consists in part of red particles, we can well understand the pallor of countenance, and deficient colour of skin, characteristic of the disease, inasmuch as a large quantity of colouring matter is removed from the circulation; but the deficient proportion of red particles observed in those cases of anæmia caused by the abstraction from the blood of albumen, either in the form of leucorrhœal discharge, or as it exists in some diseased forms of urine, requires explanation, inasmuch as it must necessarily be a secondary effect, and one not so immediately palpable on a first view. The decrease in the proportion of the corpuscles is, I believe, brought about as a consequence of the decrease in the specific gravity of the liquor sanguinis, which by degrees renders their contained liquid of a less specific gravity than it should be, thus interfering with the proper changes which should occur between this contained liquid and the chyle poured in by the thoracic duct. It may perhaps occur, that when the blood becomes degenerated and watery, in the manner I have described, that the chyle partakes of the condition, and that therefore it still maintains a specific gravity proportionally lower

than that of the contents of the corpuscle. It is more likely, however, that the balance of health, as regards the density of these fluids, is considerably disturbed; but whichever may be the case, it is obvious that, under these diseased conditions, the blood corpuscles cannot be supplied with iron, as before, if we presume dilution of the chyle to take place in proportion to the degeneracy of the liquor sanguinis; for the iron will be in dilute solution.

It must have occurred to all who are in the habit of attending to the diseases of females, to have observed cases of chlorosis in which the anæmiated condition was prominently marked, and in which no history could be obtained showing that hæmorrhage, discharge, or flux, in any form, had taken place, to rob the blood of its solid matters. Notwithstanding this circumstance, however, the blood in such cases has become greatly impoverished; the blood corpuscles are in deficient proportion, and there is a coolness of the surface, with a tendency to blueness under the nails, indicative of deficient capillary circulation. It seems probable that we have here an imperfect excretory action on the part of the skin, as a cause of mischief, and that the superfluous water is not exhaled by that emunctory as it is in health, and that too large a proportion of it is consequently retained in the circulation, which will lead to the same evils as though the blood had lost its solids by albuminuria or leucorrhœa. Retention of water, it is obvious, will degenerate precisely in the same manner as loss of solids, and will decrease the specific gravity of the liquor sanguinis.

I do not believe that the powerful action of the skin, lungs, and kidneys, as adjusters of the specific gravity of the blood, has ever been taken into account sufficiently. We know that healthy blood has a fixed specific gravity; that if the fluid be drawn from ten healthy men, the specific gravity of the liquor sanguinis and serum will be almost identical; and yet let us remember how large a quantity of fluid is being constantly poured into the circulation, and which must be rapidly excreted, or the most mischievous consequences will result. Unless we fully comprehend the rapidity and extent of this excreting action, we shall scarcely be inclined to admit the importance of cutaneous exhalation as a preservative, and the dangers attendant on its suppression. I may here allude to those cases of anasarca which follow scarlatina, and in which it seems almost certain that the interrupted action of the skin as an excretor of water degenerates the liquor sanguinis by decreasing its specific gravity, and brings about the symptom of effusion, an evil which, from some observation and experience in the disease, I am inclined to believe is frequently to be avoided

by the use of mild saline purgatives during the prevalence of the eruption and the period of desquamation following it.

This plan of treatment ensures a moderate aqueous discharge from the intestinal surface, and tends to preserve the healthy specific gravity of the liquor sanguinis.

In considering generally the pathological relations of the anæmiated condition, from whatever cause it may be produced, we must, I think, come to the conclusion that several varieties of this disease have their origin still concealed. I speak here particularly of the anæmia called chlorosis, in which no leucorrhœal discharge, flooding, or hæmatemesis, has been observed, and to account for which I have ventured to express the theoretical opinion that the immediate cause of the degeneration of the blood exists in a loss of exhalant power on the part of the skin. I know it has been the opinion of some authors that amenorrhœa is an occasional cause of this anæmia of chlorosis; a doctrine directly opposed, however, to all that we now know of the physical conditions of the blood, for we may certainly conclude that anæmia, in whatever manner it may be produced, is a cause and not an effect of suppressed uterine discharge. Our state of knowledge as regards the anæmia of the morbus Brightii is somewhat in advance of that which we possess concerning these simple cases of chlorosis, for we have here ascertained a sufficient cause for the production of anæmia in the discharge of albumen by the kidneys; so, in leucorrhœa, menorrhagia, and bloody fluxes generally, we at once can detect an immediate cause for the symptom of anæmia.

In cases of malignant disease there is an appearance produced very analogous to anæmia, but no analyses have been made of the physical and chemical condition of the blood, in such cases, to enable us decidedly to class the condition under this head. There is, however, an analogy between such cases, and those of chlorosis without discharge, in so far that the pallor and pearly whiteness is prominently noticed long before the breaking down and drain of ichorous matter robs the blood of solid constituents.

Anæmia is a symptom of importance in itself, inasmuch as the degenerated blood is capable of producing secondary mischief, and it becomes a matter of absolute necessity that remedial measures should be taken to relieve this condition, when present, while we search for the more remote cause of mischief; for whatever that may be, and in many cases it seems that the blood itself is originally in fault, it is but reasonable to suppose that we increase our chance of effecting a cure if, by our treatment, we first reduce the blood to the healthy standard. It will, I am sure, have occurred to many, to

have benefitted their patients materially by the application of remedies calculated to relieve the anæmiated condition which may have been induced even by a cause which did not itself admit of removal, and thus to have increased comfort and lengthened life. Whether the kidney, the heart, or the existence of any malignant form of disease, be the cause of anæmia, we are almost always able to produce marked benefit by the use of ferruginous medicines, and the exhibition of purgatives; remedies which act beneficially by assisting in the removal of the superfluous water, and in the formation of chyle, such as, from its chemical and mechanical condition, may be able to assist in the production of hæmatosine.

A marked instance of the benefit to be derived by treating this symptom of anæmia, in cases in which the principal evil does not admit of removal, occurred in a patient admitted under Dr. Babington, and lately under my care at Guy's Hospital. The following is a brief sketch of this case.

Robert Curry, æt. 18, was admitted into the hospital on the 18th of December, 1844. He was of delicate frame, and had been sickly from a child. He had before been a patient in the hospital, and was cured of a severe attack of rheumatism and rheumatic pericarditis by Dr. Babington. During this first attack he was bled, and underwent general antiphlogistic treatment. He was relieved but greatly weakened by the attack, and returned to his trade of a butcher before sufficiently recovering his strength. While lifting a heavy weight, he one day experienced a severe pain in the chest, which sensation was immediately succeeded by dyspnoea and palpitation. On his second admission into the hospital his principal complaint was of pain in the precordial region, palpitation, and dyspnoea, with pain in the limbs. He was anæmiated, the pulse was hurried, and tongue white: on auscultation a distinct pericardial rubbing was heard over the sternum: no other indications of disease were present. The treatment of this case consisted first in the application of leeches and use of counter-irritation over the precordial region, with the effect of relieving the pain. He was then immediately ordered the compound steel mixture, and the occasional use of purgatives, with the effect of relieving every symptom of his disease, and reducing his circulation to a regularity such as prevented the occurrence of dyspnoea, and rendered the pericardial rubbing no longer audible. He is now capable of using considerable exertion without distress, notwithstanding that when greatly excited the pericardial rubbing can be heard indicating the existence of the original disease, which, however, no longer produces its distressing symptoms, in conse-

quence of the improved state of the blood brought about by treating the case as anæmia. As bearing upon the principle of treatment, though somewhat unconnected with the immediate object of this lecture, I may mention the benefit which we occasionally derive from the exhibition of tonic remedies in certain cases of neuralgia having their origin in organic lesion which does not itself admit of removal, but the painful effects of which may be counteracted by improving the general tone of the system.

In such cases that which formerly was a cause of disease no longer exists as such; it is paralysed in effect, though present still.

Among the diseases characterised by an excess of water in the system, there is none so pointedly showing the advantage of treating symptoms as that of albuminuria. When this disease is arrived at an advanced stage, it is scarcely to be believed that the removal of the cause would effect a cure, for the secondary effects have attained an importance making their removal a matter of necessity for the preservation of life. Whether the original seat of the mischief be in the blood or in the kidney, we know that disintegration of the former speedily takes place in this disease; that it becomes watery, and contains a smaller proportion of hæmatosine than in health, and did we know the exact nature of the first change from health, and, moreover, were it such as could be expected to yield to remedies, our efforts should be simultaneously directed against the secondary degeneration of the blood, or we can scarcely hope for success. Let us consider the exact condition of a patient suffering from advanced albuminuria, and regard the disease in its relation to the excess of water contained in the blood.

The mischief may commence in the kidneys or the blood, but however that may be, a quantity of serum has passed away with the urine, and impoverished the circulating fluid. Its corpuscles are few in number, and contain a solution of hæmatosine of low specific gravity; genesis is interrupted, and the nutrition of the newly formed corpuscles interfered with, owing to the imperfect manner in which the chyle can make its way through the envelope to the hæmatosine. Serous effusions have occurred, or are about to take place, and the patient is anæmiated. Let us suppose now that the disease is treated for anæmia, and consider what will be the result. Purgatives and ferruginous medicines are administered; the one set of remedies assists to remove water from the blood, the other to supply iron to the chyle. The liquor sanguinis is increased in specific gravity, owing to the removal of water by the aperients, and being in contact with the corpuscles containing a more dilute hæmatosine, an endosmotic

change must immediately take place. The more dilute contents of the corpuscles will be drawn out through their membrane in considerable proportion, and the place supplied by a less quantity of the more dense liquor sanguinis.

This interchange will occur just to such an extent as to equalise the specific gravities of the liquor sanguinis and the contents of the corpuscles, and no more. By the further use of purgatives more water is again removed from the liquor sanguinis, and again the same endosmotic changes will be effected upon the corpuscles. By this use of purgative medicines, the corpuscles have, through the medium of the liquor sanguinis, had the specific gravity of their contents considerably increased, and the chyle entering the circulation, and coming in contact with these bodies, is now able to effect the necessary changes by entering through their membrane, and supplying iron for the formation of healthy hæmotosine.

The ferruginous medicines may be regarded as playing a secondary part in the removal of anæmia when purgatives are administered. Their immediate action is to supply to the chyle that element which is always found in the red contents of the blood corpuscle; but unless a very large quantity of water be removed from this fluid, so as to reduce its specific gravity to the natural standard, and render it far more dense than the chyle, we can scarcely expect that the ferruginous solution will enter through the membrane freely; and, therefore, in these cases, free use of purgatives, more especially of the hydragogue character, seem especially indicated, and it is very common to meet with cases in which iron has failed to exert a beneficial influence until purgative medicines have been persevered in for some time. So marked, indeed, is this peculiarity, that it would lead almost to a belief in an essential difference between such cases, and those which speedily yield to tonic treatment by iron. Regarding the disease, however, as one in which the action of the chyle is interfered with, and being aware of the mechanical conditions necessary to its action on the corpuscles, we can easily understand that it is as reasonable to treat the disease with purgatives as with iron—the one set of remedies inspissating the contents of the corpuscles, and assisting them to endosmose chyle in the manner I have described; the other tending to produce a chyle richer in iron, and which, though it may be able but imperfectly to permeate the membrane of the corpuscles, still supplies a larger quantity of iron in that portion which does enter, than would have been the case had not iron been administered. There are other methods of depriving the blood of water which should not be overlooked in the treatment of

anæmia, the most important of which is that by the skin.

A case of anæmia, which particularly attracted attention, owing to its severe character, occurred to me about three years ago, and was greatly relieved by this treatment—frictions and occasional baths being the means resorted to. In this case, the blood corpuscles, when viewed under the microscope, were observed much distended, a condition prominently shown by those seen on their edges, which were from twice to three times their natural thickness. The sp. gr. of the liquor sanguinis was extremely low, as ascertained under the microscope by the application of solutions. Thus, it required a solution of a sp. gr. as low as 1,007 to effect any considerable endosmotic action, whereas healthy blood becomes so affected by a fluid of 1,029.

I am inclined to believe that the advantage derived from the use of baths consists more in cleansing the skin, and preparing its surface for the excretion of water, than in any benefit that can be produced by the immediate perspirations occasionally observed. It seems probable that water enters the pores more freely than might at first view be imagined, and that it is this superfluous water which passes off in these perspirations. After remaining for some length of time in a cold bath, Chossat found the sp. gr. of his urine scarcely to exceed that of distilled water. This excessive tenuity can scarcely be considered simply as the result of suppressed cutaneous exhalation, and it seems probable that water was absorbed by the cutaneous surface in large quantity. The best method of ridding the blood of excess of water consists in keeping the skin clean by moderate use of baths and frictions, and then enjoining regular exercise as an important part of the treatment. By these means the capillary circulation is accelerated, and blood thrown upon the skin, which is now prepared to excrete water freely for the relief of the blood. The advantage to be derived from free cutaneous transpiration is occasionally to be observed in those chlorotic patients whose mode of life leads them to frequent crowded assemblies, who perhaps take but little exercise except in the vitiated air of the ball-room, and who, to the surprise of their friends, not only escape many of the inconveniences affecting those apparently more fitted to bear such exertions, but, on the contrary, rise on the following morning refreshed and in spirits; a result almost always attributed to the beneficial mental effects of association, but which in many cases I think may fairly be referred to the improvement effected in the blood by free and long continued perspiration. In the case of anæmia, in which I have described the sp. gr. of the liquor sanguinis as being

extremely low, the blood corpuscles were considerably dilated: this is not always the case, because, whatever may be the degree of tenuity of the blood, an adjustment will soon occur between the liquor sanguinis and the contents of the corpuscles, and in many cases of anæmia that I have examined the corpuscles have been pale and flattened. When, however, these bodies are distended, the condition may be regarded as an indication that a fresh portion of water is becoming retained, and is producing effects on the blood at the period of experiment.

In concluding these remarks, I may perhaps be allowed to express a hope that if I have failed to convince, I may yet have suggested matter for reflection which abler and more accomplished minds may hereafter succeed in applying to the advancement of pathology, the treatment of disease, and the relief of the sufferings of our fellow creatures.

APPENDIX TO THE ESSAY

ON

DISEASES OF THE NERVOUS SYSTEM:

CONTAINING NOTES OF THE LECTURES OF
THE LATE PROFESSOR GREGORY,
OF EDINBURGH.

By EDWARD BLACKMORE, M.D. Edinb.

Member Extraordinary of the Royal Medical
Society of Edinburgh, and Physician to
the Bath Penitentiary.

[Continued from page 794.]

On the Cure of Apoplexy.

THE prevention of the disease is most important; attend to the plethora of the head. The regulation of the diet requires attention; it must be a cool and spare diet. Animal food is more nutritious than vegetable; soup, beef-tea, and broths, are a part of animal food; barley or rice in soup promotes the mixture of the fat with the water. This may be allowed to those to whom we do not allow solid food or strong broths. They who are disposed to apoplexy should live principally on vegetable food, such as farinaceous matters—wheat, barley, rice, potatoe, and the roots of vegetables. The patient is not to fill his stomach with a large meal. He may take milk, whey, butter-milk; new milk is very nourishing. In Scotland they allow for the support of a labouring man 160 pounds of oatmeal a week, and milk with it. Cornaro lived to extreme old age on a very spare diet; but he took much wine.

See the case of a miller, who was enormously fat, while using a large quantity of fat meat and ale; he dropped these, and gave up fermented drinks; ate pudding of coarse flour and milk, with eggs,—then without eggs. For years he lived on a pound of biscuit, and a pound and a half of milk, taken at two meals in the day; he enjoyed good health, and was stronger at the age of 50 than at 25.

You must forbid strong liquors of every kind to apoplectic people; all strong spirits are to be given up by them for ever; such drinks, either with water or without it, are most pernicious. Small beer is useful as a laxative in some cases. People ask, "Should they renounce these suddenly, or by degrees?" I think, at once. No one would die for want of strong liquors. Some people are said to have died from a sudden change of diet. I am very sceptical of this. They must also renounce the use of tobacco; it is the most abominable poison ever introduced; even snuffing it up the nose produces vertigo and intoxication; a pinch of snuff impairs the appetite. The smoking of tobacco is more common now than it was forty years ago; it is sometimes enough to bring on palsy (see Burserius, *De Morbis Nervosis*). Some persons tried who could smoke the most; one died at the seventeenth pipe, another at the eighteenth. I knew an instance where it brought on headache for some days. It is a kind of intoxicating drug, and is attended with much danger; some part goes down into the stomach, as happens in chewing it; it must have bad effects. One snuff-taker suffered most grievously with stomach complaints, which I attributed to his taking snuff. Another was seized with vomiting, and threw up a large quantity of snuff.

Moderate exercise is necessary; violent and sudden is dangerous. I recommend general regular exercise; not too long continued; not such as would overheat them. You should not always allow a person predisposed to apoplexy to go on horseback.

Enforce the proper employment of evacuations; keep open the body; insure two motions every day. Try a vegetable diet for this purpose,—stewed prunes, pears, and apples; barley-broth also is laxative; milk, particularly when boiled, is binding. Give a purge

occasionally, as sulphate of magnesia, colocynth, and the compound powder of jalap. Use aloe and rhubarb on going to bed, or jalap and calomel. Active saline purges are also sometimes required, as sulphas sodæ, tartaras potassæ et sodæ, sulphas potassæ; they lessen the flow of blood to the head so much, that the face will look pale; people even fall into syncope from their operation, which is the reverse of what produces palsy and apoplexy. People will take mineral waters, even the Harrowgate, who will not take medicines. It is the purge that makes that water valuable; the sulphur in it is nothing. The change of air also, which people get in going to watering-places, is useful.

An issue or blister about the head or neck is good. I recommend it if the other means are inefficacious; but the evacuation is so small, that it is not so useful as purging.

Blood is to be drawn. I bleed to twenty ounces, if the threatening symptoms are urgent; if they are less severe, I employ topical bleeding by leeches on the head; but this evacuation being slow, the effect is not so great. Cucurbitulæ cruentæ are better than leeches. I recommend in some cases opening the temporal artery; if the blood does not flow, you should apply cupping-glasses.

The excretions are lessened by bleeding, for it relaxes the vessels. Bleeding from the head, some say, increases the habit of determination of blood to it; but if the threatening of the disease is urgent, you try both local and general bleeding.

The cure in the attack.—On the attack coming on, you must use powerful remedies. Maintain the erect posture; people are to be propped up in bed. People faint on sitting up while blood is drawn, from the flow of blood to the brain being lessened; on lying down they recover. Weak people faint in the erect posture. Keep the patient in pure cool air; it is hurtful to the brain and to the lungs to breathe impure air; so the keeping the patient's own heat about him by a load of bed-clothes, and the accumulation of the perspirable matter, is bad. Tight ligatures about the neck are bad; the face will swell and look blue from them; therefore take off the neckcloth, and open the shirt collar.

A large bleeding is to be employed from the arm or jugular vein. Some physicians object to bleeding. Dr. Fothergill says, "Bleeding requires dispassionate consideration; hemiplegia or death may follow it. If the pulse is full and tense, with an appearance of suffusion in the countenance, even then bleeding is performed much oftener than is proper. The pulse is an insufficient guide for bleeding: consider the habit of body before you bleed; if purging do not relieve, bleeding will sap the strength; and for the most part it is injurious." Now, however this may apply to people in London, we bleed here without ceremony: if the patients die after it, the attendants may think death was from the bleeding; but if they be not bled, they will die in a few hours. In the case of a little thin man, who was very pale, so that you would hardly conceive he was in a plethoric state, I ordered spare diet, maintaining an open body and gentle exercise; he was relieved for a time, and then he fell early in the forenoon into a fit, with complete coma; he was bled largely, and while the blood was flowing he awakened. In a few hours, however, he was again attacked, and died. Dr. Fothergill has cases in which he thought bleeding did harm. It is strange that what is proper before the fit comes on, should be improper after it has come on. The flow of blood to the head will continue except you bleed. I have often seen the immediate good effects of bleeding. There will be no end of controversies with respect to the practice of physic. I believe apoplexy often so far resembles inflammation, as to favour the idea of its being from an hæmorrhagic action of the blood-vessels, and it is named by Hoffman hæmorrhagia cerebri. We bleed to twenty ounces, or repeat moderate bleedings. Blood has been drawn to eighty ounces in a short time, with a good effect. There is no reason to prefer bleeding from the jugular vein rather than from the arm. It was an old practice to bleed from the ranular veins under the tongue. Open the anterior branch of the temporal artery; apply cupping-glasses, or leeches not less than a dozen. The good of topical bleeding is from the effect of the sympathy of the external and internal parts, and not from the quantity of blood drawn. Sometimes

it is proper to reduce the pulse by cold, purging, and low diet, and not by bleeding. The head is to be shaved, and cold applied by washing it with water and vinegar; after this, you might apply a large blister on the crown of the head.

Purging is the next powerful remedy to bleeding. Give two drachms of sulphate of magnesia every hour, and the decoction of senna, which is better than the infusion; give also ten or twenty grains of jalap in honey or treacle, with calomel, or give ten grains of calomel without the jalap. I do not like the larger doses of calomel; I should not use it indiscriminately. A purge has a great effect on the head: but there may be such torpor of the bowels as to render purgatives inefficacious. Clysters are good; the enema terebinthina was formerly much used; clysters of water, or decoction of senna, with an ounce of sulphate of soda, are proper. The effect is instantaneous.

Emetics are recommended, under the idea that a full meal is the common cause of apoplexy; an undigested meal, they say, pressing on the aorta, forces the blood to the head. A full meal is not the most common cause of the disease. I know of many cases which occurred early in the morning, and just before dinner as well as after it; yet rich high-seasoned food is a powerful stimulus, and will throw more blood to the head. If the danger is from a flow of blood to the head, an emetic would be dangerous, for vomiting increases the surcharge of blood in the head. In fever patients, an emetic in a full habit of body has been fatal; they have become delirious and comatose. Yet tartarized antimony may be useful in apoplexy, the vomiting from it being less dangerous than the state it is to remove. If people require bleeding and an emetic, the former should go first. The sulphate of zinc operates quickly, and is safer for removing undigested food than the antimony.

Sinapisms to the feet may be useful; but they are not to be trusted to.

In serous apoplexy, which occurs in people who are not plethoric, but who show a tendency to dropsy and a depraved habit of body, in whom a watery effusion in the brain takes place independent of active determination of blood to the head, it would be absurd

to employ remedies as in the sanguineous disorder. I believe that these varieties are essentially distinct, and that the treatment should be different; some cases, however, of this species are relieved by a moderate bleeding, but I don't often think of employing it in dropsical people who become comatose; they are relieved by blisters to the head and neck, and by purging. Drastic purges are useful, even in unpromising cases. The coma has gone off while the purging has been going on.

The Treatment of Palsy.

People seldom die of the first fit of hemiplegia, when the inflammatory state has been removed. Sometimes the attack is very transient, and hence lavender drops get the credit of the recovery. You should not always attribute to a medicine the favourable changes that appear. All stimulants, general or local, as volatile alkali to the nostrils, in this variety of palsy, injures the brain; yet people will revive attempts at old-fashioned practice. Recovery may be very slow. May the bad effects of pressure on the brain remain after the pressure is removed? I believe they may; people live for years after hemiplegia, without recovering fully. Make pressure on the nerve of your leg; remove the pressure, yet the numbness will continue for some time. If you were to bruise your sciatic nerve, you would not recover the use of the limb; so, when a part of the brain is injured by pressure, this may be removed and yet the palsy will remain.

Stimulants, external and internal, have been used. I have little faith in them; they have been supposed to do good, when the real benefit was from nature and time. People have recovered just as well without them, and they have used them without the least benefit. Stimuli are little to be relied on in hemiplegic palsy; in the palsy of the legs from cold, and in partial palsy from the mineral poisons, they have been useful.

External stimulants are safer than internal, and there is a greater chance of success from them. Sulphuric acid with oil has been applied to the skin; it is, in my opinion, useless. Ammonia is a better stimulus, mixed with eight

parts of oil, as you don't want to produce permanent inflammation on the skin. Ammonia applied to the nostrils is dangerous. Sea salt is also used, so is brine; as a rubefacient it is of inferior efficacy to the linimentum ammoniæ. Volatile oils are powerful stimulants; as oleum succini, petroleum, terebinthina. I use mustard most commonly; sinapisms induce inflammation, which may run into gangrene; you must look well to the limb after applying it. Sinapisms will induce inflammation in one hour; in general they are safe; a blister is, however, preferable. Stinging with nettles also is used for palsy of the limbs. Friction with a flesh-brush, or a rough flannel cloth, or a horse-hair cloth, is a powerful stimulus to the nerves and blood-vessels of the skin, and it promotes the circulation. Some physicians impregnate the flannel with aromatic steams, or dusts, as those of styrax and benzoin: patients then think more of them: the friction is the most powerful part of the remedy. Heat is, in general, the most powerful of all stimulants; by it life is supported. Warm bathing is used, and the hot mineral waters, as the Bath waters. A safe way of applying it is the warm pumping.

Cold is a stimulant sometimes; you see this in dashing cold water over people to rouse them from syncope. The cold bath is used in the cure of palsy, supposing it is a tonic. It is stimulant only from intense cold made by a shock; cold permanently applied is a sedative, and would benumb the parts; a transient sudden application of it is followed by an increase of heat all over the surface, from the increased action of the heart and arteries. The plunge bath is rather an ambiguous remedy; and cold applied to the extremities may drive the blood to the head, and bring on a new attack of palsy: I don't like to prescribe this bath. The shower bath is safer, and more likely to be effectual; but the feet and legs may be chilled by the cold water.

Electricity is a powerful remedy in the palsy of water-gilders from quicksilver; and it is applied to the cure of palsies of every kind. I doubt if any one in palsy, not from mineral poisons, was ever cured by that stimulant. I have known it tried in many cases,

carefully, for a long time; not one derived benefit from it. The sparks are safe; I have had hundreds taken from the extremities, without the risk of inducing fresh attacks; the shocks are not so safe. The difference in these two modes is only in degree.

Exercise, so as not to produce fatigue, is a very excellent remedy; strength will be gained by it, but it must not be violent.

Some recommend the fumes of burning alcohol to be directed to the palsied limb; don't trust to it.

Internal stimuli are of less use, and more dangerous, than the same substances used externally. Some give ten grains of carbonate of ammonia; others give mustard or horse-radish. The patient may use it for a condiment; but I doubt if the stimulant in the stomach has a direct effect on the palsy. Infusum raphani is diuretic, and may stimulate the absorbents in the brain to carry off the effused serum. Aromatics are used, as pepper, and the essential oils; their stimulus is too great, too permanent; that of carbonate of ammonia is sooner over. Some give alcohol, as in the compound tincture of cardamoms, and the aromatic spirit of ammonia. I disapprove of it; it cannot do any good; and any approach to that poisonous article alcohol is improper.

The Germans recommend many things of this sort; they are too credulous regarding the virtues of medicines.

Some practitioners give guaiacum, ten grains in a bolus; or in a mixture, in which form I avoid it. Some use the tincture, in water or milk; it sticks about the teeth. I don't use it much; I don't rely on it. It is given to produce sweat; it does so; but sweating may not be good in palsy.

As to tonic medicines, they are perfectly insignificant; yet I prescribe them to gratify patients. A patient might suffer from an improper use of guaiacum; yet a small quantity of bitters, or iron, as thirty drops of the ammoniated tincture, may be taken—if they please; or the precipitated carbonate of iron, which I use. The oxide is here brought into an impalpable powder, by precipitating it from the solution of sulphate of iron with carbonate of soda. It is very safe, and is a tonic if any medicine gives

strength; yet I believe there is not a decisively tonic power in any medicine whatever.

Antispasmodics, as assafoetida, have been used in palsy, as also in hysterical cases, on the idea that the rolling of a ball in the belly was from the womb, and that the uterus liked good smells, and disliked bad smells: hence the old physicians tried aromatics to the pudendum; and such was the origin of the use of antispasmodics and foetids. Valerian has been used as a *placebo*; people are satisfied if they are using something.

Emotion of the mind may do good in some palsies; just as it will stop a spasmodic affection.

[To be continued.]

POISONING BY HYDROCYANIC ACID.

To the Editor of the Medical Gazette.

SIR,

IF you think the following memoranda of a case of poisoning by hydrocyanic acid worth a place in your journal, you will, by inserting them, oblige

Your obedient servant,

CHARLES POOLEY.

Cirencester, March 21, 1845.

On the evening of the 23d of January, I was summoned to the aid of Mr. H., a medical gentleman of Stratton, near Cirencester, who was reported to have poisoned himself. I found him lying on his back on the hearth-rug, his head supported by a folded shawl. His countenance was placid and free from all contortions, his eyes closed, and the pupils not largely dilated; a fresh healthy colour was on his cheeks. His limbs were quite supple, and his body warm. Life had been extinct about ten minutes. From the statement made to me in the room, and which afterwards appeared in evidence at the inquest, I learnt that he had returned home from a long round of visiting, much fatigued, and feeling a pain in his chest, took the bottle of acid from its place in the surgery, and went into the parlour adjoining for the purpose of taking a minim dose to relieve it—a remedy he had more than once had recourse to before, for the same purpose. While there he was heard to stagger, and as the housekeeper rushed into the room, he fell, and an ounce-

phial, about half full of hydrocyanic acid, of Scheele's strength, corked, dropped from his hand. She rang the bell violently, and gave the alarm, and in five minutes his brother, who is a medical man, was on the spot. He was then breathing, and his pulse was distinctly perceptible at the wrist. Notwithstanding every means was tried to counteract the effects of the poison, he expired in a few minutes without any scream, and quite tranquilly.

An inquest was held on the body, and I was directed to make a post-mortem examination.

Appearances twenty-two hours after death.—Weather very cold. The body was cold and rigid. All the depending parts, as the back, shoulders, bend of elbows, &c. were of a mottled purplish colour. On opening the chest the right lung presented a dark dusky purple appearance, was not much collapsed, and contained air. On being cut into, a frothy dirty-brown semimucous fluid exuded, tinged with blood. There was no odour of prussic acid from it. In the cavity of the right pleura were about eight ounces of thin serum; the surface of the pleura was not marked by any evidence of inflammation. The left lung was of a pale colour, quite exsanguine, contained but little air, and poured out only a whitish frothy mucus on being cut into; it was firmly adherent in its whole extent to the costal pleura of the same side, and posteriorly the adhesions were so strong as to defy my strength to separate them. The pericardium was natural; it contained perhaps a little more fluid than usual in its cavity. The heart was small, and firmly contracted, and the vessels on its surface distended with fluid blood. On cutting into it about three ounces of dark coloured fluid blood trickled out, without the least appearance of coagulation having been attempted. It exhaled no smell of prussic acid. The parietes of the ventricles were a little thicker than usual. The liver was large and healthy. The spleen soft and easily broken down, resembling mulberry jam. The kidneys were firm, rather large, and slightly coagulated. The stomach contained about fifteen ounces of half-digested food, that gave out the peculiar smell of food undergoing digestion, with which also could be satisfactorily recognised the well-known

odour of bitter almonds. The mucous coat of the stomach was healthy, and smelt strongly of prussic acid after the stomach had been emptied of its contents. The intestines were healthy. The brain and its coverings were healthy, but its vessels and its sinuses were filled with dark-coloured fluid blood. It was quite free from any smell of prussic acid.

In this case, 1st, he had power to cork the bottle after having taken the poison; indicating its paralyzing effects on the sensorium not to have been instantaneous. 2nd. The placid state of his features, unmarked by any act of expiring. 3d. There was no scream, but he died tranquilly and silently. 4th. The congested state of the right lung might more reasonably be referred to the effects of chronic pneumonia than to the poison. 5th. The blood was everywhere dark coloured and fluid. 6th. The odour of bitter almonds was satisfactorily recognised in the stomach, and no where else. 7th. He lived nearly ten minutes after having taken the poison.

ANALYSES AND NOTICES OF BOOKS.

“L'auteur se tue à allonger ce que le lecteur se tue à abréger.”—D'ALEMBERT.

Remarks and Comments on the Medical and Chemical Evidence adduced at the trial of John Tawell. By G. L. STRAUSS. London, 1845. 8vo. pp.23.

WE are induced to notice this pamphlet solely on the ground that the subject of which it treats has lately excited the greatest interest in the minds of the public and profession. We have most carefully read it, and we rise from the perusal with a feeling of astonishment. It might have been, we think, more aptly designated, “An attempt at a scientific justification of murder by prussic acid.” We have in our recollection an old saying, “use soft words and hard arguments;” but the writer of this pamphlet has exactly reversed the proverb, for harder words and softer arguments on so serious a subject, affecting as it does the administration of criminal justice in respect to the most detestable crime of which man can be guilty, “murder by secret poisoning,” it has, we believe, never been our lot to encounter. The key to

the whole of the reasoning, if it can be so termed, we find in the author's conclusion:—John Tawell is an innocent man, and his execution will amount to judicial murder*. Now setting apart those who were present at this trial, and entirely excluding the legal and medical counsel employed in the defence, we do not believe that there are five unprejudiced men in the empire, capable of forming a judgment on such a subject, who share these sentiments with Mr. Strauss. This belief would at once justify us in taking no notice of a pamphlet, consisting as it does of the most unfounded abuse of all the medical witnesses engaged for the prosecution, as well as of the learned and excellent judge who tried the case, but for the interest of the subject, and its important bearing on all future cases of death from this poison.

Every man who has dabbled in poisons, even to the slightest extent, believes himself at once to be a “*médecin expert*,” and qualified to pass judgment on those, whose only object by acting as witnesses is to aid the course of justice. There never was a trial for murder by poison, involving a great and atrocious crime, followed by a righteous conviction, in which some person did not appear to object to the evidence. This has been more especially the case, when the criminal, by rank, or fortune, or talent, has excited more than usual notice:—or when his crime has been marked by more than the usual amount of the cunning and forethought indicative of the secret assassin:—he always finds his defender, and becomes *pro tempore* a martyr to the deceived laws of his country! From the trial of Captain Donellan, in England, about sixty years ago, to the more recent criminal “drama” of the “*affaire Lafarge* in France,” this remark will be found to hold good; and it would indeed have been surprising, had the case of Tawell formed an exception.

Mr. Strauss takes up the position that the woman Hart did not die from prussic acid, but from some unascertained cause of sudden death. He comes to this conclusion, too, on the evidence adduced, which we shall now proceed therefore to examine. In the first

* The greater part of this notice was written before the execution of Tawell, and before it was known that he had made any confession.

place, we entirely object to the author's introducing into his pamphlet any matters detailed at the coroner's inquest. The jury (a different jury to that at the inquest) returned their verdict against the prisoner from the evidence given in the assize court at Aylesbury. Both the counsel for the prosecution and defence specially impressed this on their minds; therefore what passed at the preceding coroner's inquest, is perfectly irrelevant. The author thinks that he can detect some serious discrepancies in the evidence of the Crown witnesses on the two occasions; but this appears to us to be trivial, and not to bear upon any important point in favour of Tawell. We are inclined to put more confidence in the legal acumen of the counsel for the defence, than we are in the medico-legal opinions of Mr. Strauss; and we are quite certain, that had there been any discrepancies material to the case of the prisoner, they would not have escaped observation and an eloquent exposure from Mr. Kelly.

The first tangible objection, with which we meet, is that only "a minute amount of prussic acid was obtained from the contents of the stomach." 1. At page 14, the author admits this to have been "about *one grain*," although he considers it absurd to infer therefrom that the deceased died from the effects of this poison. We should like to know what precise quantity of any poison the author would require to have discovered in the stomach, in order to admit the supposition of death having been caused by it. It would appear from this statement, and from his subsequent argument respecting the dose required to destroy life, that it is indispensably necessary to discover a certain quantity of prussic acid in this organ, or poisoning is not proved. The author is here adopting one of the arguments, fallacious as it appears to us, which was used by the learned counsel for the defence. Such an argument may come well from a lawyer in the excitement of the occasion, and who, "*ruat calum*," is bound to make the best of a case for a prisoner, even by the use of what to all professional men must appear the most inconclusive reasoning;—but we opine that it comes very ill, in the deliberate exercise of the pen, from a man who evidently has given some attention to these subjects,

and who certainly cannot plead the same professional excuse.

Let us put the question plainly. Is it necessary in any case of poisoning that a *certain quantity of poison by weight or measure* must be found in the stomach of a deceased person in order to prove that this has been the cause of death? If Mr. Strauss be consistent to his argument, he would answer in the affirmative; although he has not told us what is the precise quantity required, to establish innocence on the one hand or guilt on the other; for such would be the issue of the question on all criminal trials. It is notorious that persons have died repeatedly from arsenic, oil of vitriol, oxalic acid, and opium, without a single particle of either of these poisons being detected in the stomachs. It has been passed away by vomiting or purging, become absorbed or decomposed:—but, nevertheless, knowing that there are easily understood means by which poisons may be lost—not to mention that the fatal dose may have been originally small—no difficulty has hitherto been experienced, by persons who have certainly seen more of these cases than the author, in determining that poison was really the cause of death. As we understand the reasoning put forth, he would give impunity to all cases of murder by poison, unless sufficient to cause death were actually found in the stomach: *i. e.* if the quantity found were so minute as he alleges it to have been in Tawell's case, he would, so far as concerns prussic acid, account for its presence in the stomach in some other manner, and thus do away with the hypothesis of its having caused death. Now supposing a person to swallow only just a fatal dose, say about twenty drops of Scheele's prussic acid: unless the whole of this quantity were found in the stomach (this would be about equal to one grain of anhydrous acid) Mr. Strauss would object to the chemical evidence of poisoning as inconclusive. The bringing home guilt to a prisoner he would therefore make to rest in all cases of poisoning upon the inaction of the stomach and bowels during the time the person lives after taking the poison, upon its non-absorption and non-evaporation, but, above all, upon the accidental amount of the dose administered! All crafty assassins, who give only enough to de-

stroy life, would thus escape if the author had to try them, while the bungling murderer only who administered ten times as much as was required to destroy his victim, would be convicted! We shall see presently that the author places great reliance upon Orfila: let him take a lesson from what that learned toxicologist states in reference to arsenic,—the rule applying, we believe, equally to all poisons. That portion of the poison which is found in the stomach after death is the *surplus* of that which has destroyed life: so that all tests applied to the contents of the stomach act upon the residuary portion found in this organ. That which has really caused death has been carried away by absorption into the system during life.*

The learned judge who tried Tawell, and whose summing up this writer designates "*very impartial*," (sic) has given an answer, marked by sound sense, to the absurd doctrine which we have been endeavouring to expose. He told the jury that "it was not necessary to prove what quantity of prussic acid would destroy life, by the testimony of a person who had actually seen a human life destroyed by it: neither was it necessary to prove that such a quantity as would destroy life had been found in the stomach." If this were not the law, hundreds of murderers would assuredly escape conviction, and we should have numerous treatises on "Poisoning made easy," showing by accurate calculations how much and in what vehicle any particular poison might be given without incurring the penal consequences of the (Mr. Strauss's) law.

But the author goes even farther, and denies that the detection of prussic acid is any proof of poisoning at all. In support of this view he quotes Orfila's opinion, but without adducing a single fact to support his reasoning. He here proves too much; for his reasoning goes the length of showing that criminal prosecutions for poisoning by prussic acid should be at once abandoned; because "prussic acid is formed in some cases (if it applied in Tawell's case

it would certainly apply in any) in the animal organism, even although the individuals offering the phenomenon be in a state of perfect health." p. 15. Why should not the legislature, then, at once give up poisoning by prussic acid as such a very doubtful matter of proof that no person could henceforth be safely prosecuted on the charge of criminally administering it? Because, 1, it may be formed, "in some cases," in the body, and 2, because persons who are killed by prussic acid die very much like those who are cut off by apoplexy, epilepsy, or any sudden cause of death! Let it be in future, therefore, free warren for murderers!

Seriously, however, we must look to the author's facts more than his own and Orfila's sayings in support of this opinion; but we have been unable to find that he ever detected prussic acid either by the odour, or by any chemical test in the contents of the stomach of any person whose body was examined eighteen hours after death, and who certainly could not have died from swallowing prussic acid. Not a single instance of the kind do we find recorded as observed by himself or others. There has been sufficient time for Mr. Strauss to have visited dead-houses, and to have extracted prussic acid from the contents of the stomachs of the recently dead. A discovery of this kind, which his language would lead us to suppose as likely to be made with very little trouble, would have done far more service to Tawell than speculative suggestions on the possibility of its production from the decomposition of animal matter in a case in which no sign of putrefaction existed (see MEDICAL GAZETTE, p. 519), or bitter invectives against the judge and the medical witnesses. Let the following be taken as a specimen of the way in which he attempts to support his opinion scientifically, the reader bearing in mind that the reasoning (?) applies to the contents of a deceased person's stomach carefully examined only eighteen hours after death by competent persons, who could not find in it either "bitter almonds, pomaceous seeds," or "ferrocyanide of potassium," all substances not likely to escape observation.

"It is a well-known fact (?) that the perspiration of some perfectly healthy individuals exhales the peculiar odour

* So little is the law disposed to act upon Mr. Strauss's views, that a case is recorded in which a prisoner was convicted of poisoning, although the quantity of arsenic found in the stomach was only the one-fortieth part of a grain. See Edinburgh Medical and Surgical Journal, Vol. 29, p. 23.

of hydrocyanic acid; and sulphocyanide of potassium has been detected in the saliva by Tiedemann and Gmelin. Moreover, it would be very absurd indeed to deny that prussic acid may be formed in the decomposition and putrefaction of organic matter, just as likely as ammonia, acetic acid, and other similar compounds, to the formation of which the simple decomposition of organic matter gives rise. Bitter almonds, and pomaceous seeds, may be (?) present in the stomach, and subsequently, upon the distillation of its contents, yield hydrocyanic acid. Ferrocyanide of potassium is a perfectly innocuous substance: this may by chance have been partaken of (!); (as is frequently the case in manufactures of ferrocyanide of potassium—vide Liebig's lectures on Organic Chemistry in the *Lancet*), and would of course upon distillation yield a considerable amount of prussic acid." p. 15.

We were certainly not aware of the "well-known fact" referred to, of the presence of an odour of hydrocyanic acid in the perspiration of some healthy individuals; and, admitting the truth of the statement, we cannot rest satisfied with a mere odour in the perspiration of a healthy living person, as an analogous explanation of the production of liquid prussic acid in the contents of the stomach of a dead female; for we presume the author does not mean to say that the prussic acid was exhaled from the mucous membrane during life; and, if after death, he must establish the possibility of this by something like an analogical condition. If it could thus have been possibly produced by putrefaction within eighteen hours after death, should it not have been indicated by an odour? and yet on this point he strenuously argues that there was no odour, and that the witnesses who swore they perceived it (Mr. Champneys and Mr. Pickering) were mistaken. We think it very unlikely that prussic acid should be formed during the putrefaction of the contents of the stomach as readily as ammonia, or the question of its spontaneous production would not now be a matter of dispute among chemists: and Mr. Strauss would be enabled to furnish us with some facts in proof of it, instead of mere speculation. He might contend with greater justice

that when oxalic acid is found in the stomach of a person suspected to have died from that poison, it had been formed from a reaction of the elements of animal matter. Oxalic acid is actually found (as oxalate of lime calculus) occasionally in the cavity of the bladder, and why may it not be produced in the stomach? Prussic acid has never been found as the result of such reaction in the bladder or any other mucous cavity of a recently dead body; and therefore we hold that the argument is more strongly in favour of the spontaneous production of oxalic than of prussic acid. If the Crown witnesses in Tawell's case had only trusted to the *odour* of the contents of the stomach, as evidence of poisoning by prussic acid—*i. e.* if they had entirely failed in separating any portion chemically—no one would have been more indignant at their rashness than the author of this brochure; although here we find him arguing against the validity of chemical evidence, where the poison is actually separated in a liquid form, because the perspiration of some healthy individuals exhales the *odour* merely of hydrocyanic acid. If Mr. Strauss had extracted the prussic acid from the perspiration under the form of Prussian blue, or cyanide of silver, there might have been some excuse for his reasoning, and some hope of inducing chemists to believe that prussic acid is really exhaled by healthy living persons; but until these necessary proofs are adduced we shall be just as inclined to admit that healthy human beings occasionally exhale morphia, strychnia, or aconitine.

Thesulphocyanide of potassium exists in traces in the saliva, but not, so far as we know, in the mucous secretions of the stomach; and if it did, even in much larger quantity than in the saliva, we do not believe chemically that prussic acid could have been extracted from it by the process adopted by Mr. Cooper. We must give credit to the author for his silence on the "pomaceous," or "apple-pip" hypothesis. It is said that the learned counsel for the Crown was advised by chemists in the defence; but it appears to us quite inexplicable how such a view could have been taken, when Mr. Cooper, in his cross-examination, expressly told the learned counsel that in examining the contents

of the stomach "he did not observe with the apple *any pips either partially masticated or otherwise*"—this question, too, being preceded by an exact statement of what was found in that organ. So far as the chemistry of the matter was concerned, it would have been just as probable to have assumed at once that the carbon, nitrogen, and hydrogen of the apple had resolved themselves into prussic acid, as to argue that it resulted from the distillation of substances not found to be present on a careful examination of the contents, and which ought to have been present in very large proportion in order to have given any plausibility to this line of defence.

Mr. Strauss is exceedingly indignant that Mr. Cooper should have been allowed to act as a witness, he being merely an "analytical" chemist. He is also severe on Messrs. Champneys, Norblad, and Pickering, who, although regular medical practitioners, are, he considers, men of no experience. Without arguing this point with him, he might have dealt out justice to all the witnesses; but we observe that he is silent respecting a Mr. Thomas, "*a shopman to a chemist*," who, because he sold prussic acid to the prisoner in the way of business, was allowed to give a very positive opinion on a question which we do not hesitate to say would have puzzled an Orfila or a Christison; namely, How many apples were required to furnish pips sufficient to produce two grains and a quarter of cyanide of silver? And it would appear, from Mr. Thomas's experiments, that fifteen small apples are required for this purpose*. This witness was also allowed to give an opinion upon what would, and what would not, conceal the odour of prussic acid! Then, it appears, he poisoned a parrot with thirty drops of Scheele's acid, and created thereby such a powerful smell that three women were obliged to run out of the room, the scent (*i. e.* from thirty drops of Scheele's acid injected into the throat of a parrot) was so strong and suffocating. Further, he is

reported to have said that "the bird was afterwards stuffed!" Let any of our readers consider whether this was not a far stronger case to complain of the indiscriminate admission of persons as witnesses on important scientific questions, than in respect to the other Crown witnesses. But the explanation of this is, that this witness's evidence was favourable to the prisoner.

One other medical question Mr. Strauss presumes to discuss, and with an equal disregard of scientific reasoning; this is, the dose required to destroy life. He copies his facts from the defence; for we think we shall be able to show that he has very imperfectly informed himself of the exact particulars of the cases upon which he bases his arguments. Mr. Cooper obtained from the stomach a quantity of prussic acid equal to twenty grains of Scheele, or fifty grains of the London Pharmacopœial acid. The question seems to have been raised (although why, it is difficult to perceive) whether this quantity was sufficient to kill the deceased; and it was contended that it was not—a view supported by Mr. Strauss, so far as we understand his arguments. The deceased, if she swallowed any of the poison, must have swallowed more than was found in the stomach, unless we suppose that the processes of absorption and evaporation were specially suspended in her case. The author censures the Crown witnesses for stating that less than a grain of anhydrous acid would destroy life, and triumphantly confutes this view, as he supposes, by referring to himself, he having, as he says, swallowed 2.1 grains of anhydrous prussic acid, *largely* (?) diluted with water, without feeling any very considerable inconvenience! The quantity thus stated to have been swallowed without injury by Mr. Strauss is equivalent to *forty-two grains* of Scheele, or rather more than *one hundred grains* of the London Pharmacopœial acid! This is corroborated by a statement that a cat can bear without inconvenience from two to three drops of anhydrous acid, diluted with from four to six ounces of water; or even two drops of pure anhydrous acid placed on its tongue, if the animal can be induced to hold its breath. But what does all this amount to? If the author had once swallowed an ounce of Scheele's acid with im-

* We believe Mr. Cooper to have been quite correct when he said that the quantity of prussic acid which he obtained from the pips of about fifteen apples was quite inappreciable. We are not even certain that the witness, Mr. Thomas, could distinguish cyanide from other compounds of silver, and certainly, from his status, should decline receiving his opinion on the point.

punity it would certainly be a very remarkable fact in toxicology, and show a constitution impregnable to poisons which even Mithridates himself might have envied; still, it would not prove that others of the Queen's lieges could swallow with equal impunity thirty drops of Scheele's acid; and we believe it to be certain that, at the strength of five per cent., ninety-nine out of a hundred persons would assuredly die from this dose. The deceased woman, Hart, probably possessed only an average constitution; she did not swallow the poison in a gallon of porter, nor did she place it on her tongue and hold her breath! It is impossible to conceive what can have been the author's motive in bringing forward such inapplicable illustrations of the alleged harmlessness of what most persons regard with propriety as a poisonous dose of prussic acid*. A few cases are reported where persons have recovered from ounce-doses of tincture of opium; but a person has certainly died from a dose of two fluid drachms. To adopt Mr. Strauss's reasoning, if a man has once been able to bear a large dose of a poison, it is not probable that a smaller dose will kill another man, although given under very different circumstances. This reasoning, we think, cannot be improved!

The author goes on to say, in spite of the very absurd conclusion to which his argument necessarily tends, that "a most egregious blunder" has been committed in English works by their authors stating that in the cases of the seven Parisian epileptics, each was killed by so small a dose as seven-tenths of one grain of the anhydrous acid. Dr. Christison states that the dose was two-thirds of a grain; Mr. Taylor, seven-tenths of a grain. The most curious part of this history, and a very singular test of the author's accurate research, is, that the cases referred to are reported by Orfila, with a full account of the inspection of the body of one subject, in the *Annales d'Hygiène*

for 1829 (p. 507), when Mr. Strauss says the lamentable event took place "only in the year 1830!" p. 19. Perhaps it will be better to trust Orfila in his original report, than Mr. Strauss in his quotation; for although the latter quotes Orfila, he has evidently only looked at the last edition of his *Toxicology*, in which it is stated to have occurred in 1830. Orfila says (*loc. cit.*), "Mais ce qui achève de nous convaincre, c'est le récit de sept ouvertures de cadavres d'individus ayant tous succombé dans l'espace d'un demi-heure à trois quarts d'heure pour avoir pris chacun environ vingt grains d'acide hydrocyanique médicamenteux." Dr. Christison and Mr. Taylor have evidently regarded this as Vauquelin's acid, *i. e.* at 3.3 per cent., which would make the dose nearly what they represent it, were the French grains equal to the English; but as the weights are not equal, the dose would be actually less. Orfila does not state to what medicinal acid he refers, and after dealing in "ifs" on this very material point, Mr. Strauss goes on to say: "Thus, for seven-tenths of one grain of prussic acid, which we find reported in the English books on this subject, we must substitute at the least two grains and one-fourth (*i. e.* of anhydrous acid). Had Mr. Baron Parke known this fact, he would probably have abstained from stating, in his summing up, that a larger amount of prussic acid had been found in the stomach of the deceased than would be quite sufficient to destroy life." (p. 20). That two English writers should differ from each other respecting the dose to the amount of only one-twenty-fifth part of a grain, is not very surprising, when the French authorities differ among themselves, and leave the matter so unsettled. We believe, however, that Vauquelin's acid was here intended by Orfila, when he spoke of medicinal prussic acid. In connexion with this case, the author again raises up the "odour" of prussic acid. Although Adelon, Mare, and Marjolin, could perceive no smell, yet Gay Lussac and Orfila could perceive it (p. 20) eight days after death. Orfila states this in the last edition of his *Toxicology*, published *fourteen years* after his first report of the case, in which he says nothing whatever about the perception of any odour. On the contrary, in a

* The opinion of many toxicologists that thirty drops of Scheele's acid are certainly sufficient to kill an adult, has been fatally confirmed since Tawell's trial by the following case, communicated by a friend. A mixture containing two drachms of Scheele's acid was given by mistake to a young woman. She was ordered to take one-fourth part for a dose. She died in ten minutes after the first dose, containing thirty drops of Scheele. The case occurs at the very time to show the absurdity of the defence on this point.

very full account of the post-mortem examination (*Annales d'Hygiène*, 1829, p. 509) of one of the seven patients he expressly says, "Après avoir fait les ligatures convenables pour recueillir les matières contenues dans le canal digestif, ce canal est enlevé : on place dans un vase tout ce que renferme l'estomac, et on procède à l'examen de celui-ci : nulle odeur particulière ne s'en exhale." Again, subsequently : "Nulle partie n'exhalait l'odeur d'amandes amères." What greater confirmation of the correctness of Dr. Christison's statement could be needed?—and yet such absurd stress was laid upon this, as a most serious error at the trial. Dr. Christison says that there was no odour in the stomachs of these patients, when it is alleged to have been perceived by two persons out of five! The fact is, it seems to have been forgotten both by Mr. Strauss and those who conducted Tawell's defence, that the seven patients had *seren* stomachs; and so far from finding it stated that the odour was perceived in all, the earliest report of one case shows that in that instance, taking Orfila's own words, there was no odour whatever of the poison perceptible to himself. It is worthy of remark that Mr. Strauss makes the loss of odour here a still more remarkable fact, by saying that the dose of anhydrous acid was $2\frac{1}{2}$ grains, instead of 7-10ths of a grain!

We have very little to say upon the author's objections to the evidence from an inspection of the body. There are some pathological alterations which he says he should invariably expect to find in all cases where the person has lived a few minutes after taking the poison; but what they are he omits to state, although it is a great desideratum in toxicology that there should be some certain and indisputable evidence from this source. He says, the bile is, "*in most cases*," of a blue colour; whereas two cases only are known, on the authority of Christison and Taylor, in which this has been observed. These occurred to Merzdorff, (*Horns' Archiv*, 1823, 2, 51), who expressly states that these were the only two he ever met with in which the bile presented this colour. He then enumerates some common morbid conditions of the body which are found in cases of sudden death from other causes; and after this summary of a series of negative or

equivocal conditions, he says, "Of all these indications of the action of prussic acid, we have none in this instance." (p. 22).

We have now waded through this pamphlet, and we cannot help expressing our surprise that any reasonable man could ever come to the conclusion, from the moral, circumstantial, and medical evidence adduced in Tawell's case, that the deceased had not been poisoned by prussic acid. At first we were inclined to treat the pamphlet as a ruse—a sort of popular *ad captandum* article for a weekly newspaper—but we verily believe the author is quite serious in the whole of his *non sequiturs*. The mischief which a pamphlet like this is capable of doing, filled as it is with showy but unsound chemistry, and selected quotations from the works of French authors, who, if they were consulted, would most probably protest against the use made of them, has induced us to comment on the author's views at some length*. If his reasoning be correct, who can ever possibly be convicted of poisoning a fellow-creature by prussic acid, unless there be direct ocular evidence of the administration of the poison? The grand climax to his reasoning is, that the man who has not had a "fair trial," and has not been condemned on "conclusive evidence," has actually, it is credibly reported, confessed that he perpetrated a crime which the author proves, at least to his own satisfaction, that he could not possibly have committed—*Parturient mures et nascitur ridiculus mons*!

Schoenlein's Klinische Vorträge in dem Charité Krankenhaus zu Berlin. Redigirt und herausgegeben von Dr. L. GUTERBOCK. Drittes Heft (Schluss). 1844.

Schoenlein's Clinical Lectures, delivered at the Charité Hospital of Berlin. Edited by Dr. GUTERBOCK. Third and concluding Part. 8vo. pp. 195.

JOHANN LUKAS SCHOENLEIN, Privy

* In order to show how Mr. Strauss deals with his quotations and analogies, we may take a case which he quotes as having occurred at Chambéry, in 1841 (case of M. Pralet). This person was alleged to have died from prussic acid; but, observes Mr. Strauss, Orfila was called in to refute the evidence of two physicians and four chemists. There is not the slightest analogy between the two cases. There was no chemical evidence of the presence of prussic acid in this instance, and there was effusion of blood on the brain, which accounted for the symptoms.

Medical Councillor of Prussia, and Ordinary Professor of Therapeutics, and of Clinical Medicine, in Berlin, was born at Bamberg in the year 1793. After the usual preliminary studies, he graduated as physician at Würzburg in 1816, and four years later was appointed one of the *extraordinary* professors of that University. In 1824, he succeeded Dr. Friedreich in the chair of clinical medicine there, and also as medical director of the Julius Hospital, long renowned as a place of clinical instruction. Würzburg attained still higher consideration through the prelections of Schoenlein, and became the resort of a numerous concourse of students from all civilized lands. Ere long, however, in consequence of some misunderstanding with the Bavarian government, Schoenlein was obliged to abandon the scene of his labours, and betake himself to Zurich. Here he maintained his academic popularity. From thence he was invited to Berlin by the reigning sovereign of Prussia in the year 1840, where he possesses an ample field for pathological research.

The materials composing the volume of which the conclusion is now before us have been very ably selected and put together by Dr. Güterbock. The record commences with the last portion of Case 38, namely, one of ascites proceeding from hypertrophy of the spleen, tubercles in the lungs, and scrofulous phthisis of the kidney. Case 39 is one of diabetes mellitus in conjunction with pulmonary tubercles: some curious remarks are interpolated touching the cause of the formation of sugar. The next case is one of scarlatina, with violent angina, attended by extensive desquamation from both the internal and external surface of the body. Case 41 is erysipelas of the face complicated with delirium tremens; some observations are appended relative to the employment of cold affusion in that form of erysipelas, and the sequelæ of the disease. Case 42, the last of the series, is an apoplectic seizure, followed by palsy of the right half of the body, and pain in the right foot, treated by *nux vomica*, issues, and electro-magnetism.

We subjoin, by way of extract, Schoenlein's views touching scrofulous disease of the kidney:—

“This malady is one of great rarity.

I have not seen half a dozen cases of it; at least, where there has been a fatal termination. Although I believe it to be curable at the beginning, after it has reached a certain stage it is beyond the power of art. It is therefore important for the medical practitioner to be able to detect its presence. The primary phenomena resemble closely those of incipient pulmonary phthisis. Young persons are most prone to be attacked, as children of from 7 to 8 years old, even up to the period of puberty, who are of a strumous habit, or present marks of strumous affection of the external parts. Such individuals manifest, generally after exposure to cold and moisture, an affection of the urinary organs—at first indistinct, a feeling of pressure in one or both regions of the kidney, pain in the sacrum, rarely darting: on further examination it will be found that the pain is referred, not to the middle, but to the side of the vertebral column; there are frequent calls to void urine, especially during sojourn in a damp atmosphere of a low temperature. I have perceived that this urgency to micturition was aggravated at night (just as the cough in the instance of pulmonary tubercles); young children are apt to wet the bed, hence this habit ought to be watched when they are of a strumous disposition. The urine is, in the outset, pale, limpid, or else turbid from mucus, very like the tracheal secretion coughed up by phthisical patients at an early stage. Only when violent pain sets in will blood be discovered in the urine, periodical hæmaturia (akin to hæmoptysis). In individuals nearer puberty other symptoms are superadded, as erections, and painful retraction of the testicles, like what occurs in cases of stone in the bladder. The above are the characters of tubercular disease of the kidneys while susceptible of cure. The treatment ought to consist of local depletion, frictions with iodide of potassium, or iodide of mercury, over the region of the kidneys, saline baths, iodine internally by itself, or in mineral waters, with great attention to diet and drink—the last ought to be asses' or goats' milk mixed with mucil ge.”

(p. 392.)

Observations on Variola Vaccina, or Cow-Pock. By Sir MATTHEW J. TIERNEY, Bart. K.C.H. M.D. &c.

THIS little pamphlet appears at a very opportune moment, inasmuch as certain parties have been trying most unwarrantably to lower in general estimation the practice of vaccine inoculation. The inferior classes of society are slack enough in resorting to it; therefore any attempt to slight its importance cannot be too severely censured.

Sir Matthew seems to have been one of the first persons engaged in carrying out Dr. Jenner's invaluable discovery. Under the head of Instructions, he asserts that an accurate knowledge of the signs of infection, and of the character and progress of the vaccine vesicle, is essential to the success of inoculation. He points out the occasional deviations from the ordinary appearance and character; describes the spurious pustules which afford no security against small-pox, with their probable cause; the methods of taking vaccine matter, and of preserving and conveying it; the modes of inoculation; the constitutional symptoms, and appropriate medical treatment. Sir Matthew has embodied a statement of the formation of the first county vaccine institution, established in Sussex in the year 1804.

Essay upon Cretinism and Goitre. By E. WELLS, M.D. late Fellow of New College, Oxford; and Radcliffe Travelling Fellow. London, 1845. 8vo. pp. 69.

THIS essay owes its birth to a professional residence at Interlachen, whereby the writer had frequent opportunities of visiting the institution for the education of infant cretins, established upon the Abendberg, in the Canton of Berne, in the year 1840, by the benevolent Dr. Guggenbuhl. It comprises observations on the origin of the term cretinism, an account of the authors who have written upon cretinism, the description of a cretin, the proximate and predisposing causes, with the different forms of cretinism: the diseases to which cretins are liable, and concludes with the physical and moral education of the infant cretin. Cretinism the writer considers to be "a mental and bodily degeneration, having for its proximate cause an impoverished

condition of the blood, and for its predisposing cause, the damp, warm, and stagnant atmosphere of the Alpine valleys." p. 43.

In Chapter III. will be found a very graphic description of these misshapen beings; a portrait of one is prefixed by way of frontispiece. The necessity for good education during the tender years of life is cogently pointed out in Chapter VIII. We recommend the essay to those who wish to study this interesting subject.

MEDICAL GAZETTE.

Friday, April 4, 1845.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

RETROSPECTIVE EFFECT OF THE REGISTRATION CLAUSES.

MUCH needless alarm appears to have been excited among members of the profession, respecting the mode of registration to be adopted under the new Medical Reform Bill. A report has been widely circulated, to the effect that, as the bill stands, the present members of the London College of Surgeons would not be permitted to register as "Surgeons," but merely as "Licentiates in medicine and surgery." This has been complained of as a grievous injustice; and such undoubtedly we should regard it, if there were any grounds for believing that this was the intention of the framers of the bill. The result would be, that under the new act there would be no "Surgeons," except those who had been already admitted as Fellows of the London College. The act would thus become retrospectively penal. Every individual possessing the diploma of the London College of Surgeons would be compelled to forego any privileges derived from that document, and sink to the status of an apothecary, without retaining even the title of surgeon.

That such has been the view taken by many, of the thirty-second clause of the new bill, is evident from the numerous letters which have appeared in the medical journals, and which have been addressed to us on the subject. In a recent number of the Provincial Medical and Surgical Journal, we find a letter embodying the sentiments of the practitioners of Reading, in which the writer infers "that those who are now practising as surgeons and apothecaries, registered under the new Bill, will *lose* their title as surgeons, and *drop* down to licentiates in medicine and surgery. This appears hard, considering the position in which the bulk of the profession is placed by the recent decision of the Council of the College of Surgeons, and must be surely amended" (!) The writer then goes on to suggest a remedy:—"Supposing we are correct, might not an addition be made to the Registration Clause, allowing all who have been so many years in practice, being members both of the College and Hall, to retain the title of Surgeon; otherwise, unless compelled, we cannot give it up."

If the grievance really existed, this proposed remedy would certainly not remove it. The injustice of such an act as that of depriving a member of the College of his diploma (for it would virtually amount to this) would not be diminished by the fact that the deprivation extended to those only who had recently been admitted members. If such a rule were to be adopted, what number of years of practice could be fixed, with any show of equity, in order to entitle a man to claim beyond his brethren an exemption from this spoliation of his rights? It is the possession of the diploma, and not merely the length of time that it may have been held by a member, which gives him an indefeasible claim to hold it with all its privileges for ever: and among these

privileges is assuredly that of retaining the title of "surgeon."

It must be borne in mind, however, that there are many now practising as "surgeons and apothecaries" who will have no claim whatever to be registered as "surgeons" under the Bill. There is nothing at present to prevent a licentiate of the Hall from calling himself a surgeon, and many are practising under this denomination; but such a person will not of course be entitled to registration under any other form than that of licentiate in medicine and surgery.

The clauses relating to registration, under the new bill, are two in number, the 13th and 32nd. We shall take the last first, because it relates exclusively to the registration of those persons who are *now* engaged in the practice of medicine and surgery. We subjoin the clause:—

"Provided always, and be it enacted, that it shall be lawful for the said Council, on the application of any person legally practising or entitled to practise at the *end of this Session of Parliament*, as a Physician or Surgeon in any part of the United Kingdom of Great Britain and Ireland, or as an Apothecary in England, to cause the name of such person to be registered as a physician, surgeon, or licentiate in medicine and surgery, as the case may be, on production to the said Council of his diploma, license, or certificate, or such other proof as shall be satisfactory to the said Council, that at the *end of this Session of Parliament* he was so practising, or legally entitled to practise, and on payment of a fee of *Twenty Shillings* in the case of Fellows or Associates of the said Colleges of Physicians and Surgeons respectively, and of *Five Shillings* in every other case, which fees shall be applied toward the expenses of this Act; and during *twelve* calendar months after the *passing of this Act*, every person legally practising or entitled to practise at the *end of this Session of Parliament* as a Physician or Surgeon in any part of the said United Kingdom, or as an Apothecary in England, and during the period of

Two years after the passing of this Act, every person legally practising or entitled to practise at the *end of this Session of Parliament* as a Physician, Surgeon, or Apothecary, in any of Her Majesty's Colonies and Foreign Possessions, although not registered, shall continue to enjoy the same privileges and exemptions, and be qualified to be appointed to the same offices, and to practise in the same manner, as if this Act had not been passed, and no further or otherwise, unless registered under this Act."

The clause is evidently clumsily constructed, and is well calculated to give rise to some ambiguity. Aiming at brevity (not a common fault in Parliamentary documents), the language renders the real meaning of the clause obscure. It is first laid down that every legal practitioner of medicine may, on application, be registered as physician, surgeon, or licentiate, according to his diploma, license, or certificate or (in order to include those who were in practice before 1815) on some other proof that he is legally entitled to practise. So far the statement is clear, but then we come to the payment of a fee for this registration, and here it is laid down, that the fee shall be *twenty shillings* in the case of *Fellows or Associates of the said Colleges of Physicians and Surgeons respectively*, — omitting all reference to the *Members* of the Royal College of Surgeons, who form the great bulk of the profession. Licentiates of the Apothecaries' Company, and those who were in practice before 1815, will be registered on the payment of a fee of five shillings.

We believe that it must have been by accident, and through the ignorance of the party who drew the clause, that *Members* of the Royal College of Surgeons were not specially mentioned. He must have known so little of the profession, as to suppose that all "Surgeons" were necessarily *Fellows or Associates* of the College. We are inclined to put this interpretation upon

the omission, from the reply which has been given by the Secretary of State to Mr. Craddock, and others. The correspondence on this subject will be found at p. 813 of this volume. Whatever may be contained in the present Bill, the intentions of Sir James Graham respecting registration, as expressed in his letter to Mr. Craddock, are:—

1. A man holding the diploma of the College of Surgeons can only register himself as a "surgeon,"—but he may act as, and enjoy all the privileges of, a general practitioner.

2. A man holding the license of Apothecaries' Hall, although he may have hitherto styled himself "surgeon," can only be registered as a licentiate in medicine and surgery. Like the registered surgeon, he may act as, and enjoy all the privileges of, a general practitioner.

3. A man holding the diploma of the College of Surgeons, as well as the license of Apothecaries' Hall, must make his election. He can only be registered either as "surgeon," or "licentiate in medicine and surgery." No limits are, however, placed on his practice: he enjoys all the privileges of the two classes.

With respect to "*physicians*," the right to register will depend upon the power to practise *legally* as a physician, conveyed by the diploma or license of any of the Colleges of Great Britain or Ireland. The holders of foreign diplomas, having no legal status as physicians in this country, cannot be registered until these diplomas have been recognised, and a license to practise granted by some one of the British Colleges.

Such, we believe, will be the retrospective operation of the clause in the new bill, so far as persons now practising are concerned. Under 3, we find that a man holding the diploma of the College, and the license of the Hall, can only be registered as surgeon *or*

licentiate. In the correspondence above alluded to, we are informed "that the bill does not contemplate double registration, nor would any thing be gained by it." We cannot exactly perceive why those who now legally enjoy a double title may not be allowed, if they please, to retain it under a double registration. There is some merit in a man having gained two diplomas, and it appears like an act of injustice to deprive him of one; for although nothing could be gained in respect to the privileges of practice, yet it is substantially taking from him one of those testimonials which it may have cost him some years of extra labour to acquire. In the opinion of the public, so far as the register is likely to be consulted, a man whose name is *doubly* registered may possibly stand better than one who has only a single qualification; just as, at the present time, the diploma of the College of Surgeons is sought after by candidates more to acquire honour by a double qualification, than as a document necessary to enable them to practise. We therefore doubt the assertion that "nothing would be gained by it;" it might as well be contended that nothing is now gained by a man holding the diploma of the College of Surgeons. Whatever may be done prospectively on this subject, we think that it should be left optional with the present race of practitioners to register under one or two denominations. The only inconvenience which we can contemplate is, that it will add to the bulk of the printed register. If the double registration be denied, those who have been working for years in order to obtain the license of the Hall, at a great expenditure of time and money, will be placed in a worse position than if they had, at less cost and labour, aspired only to the College diploma. All who possess this will become at once general practi-

tioners, with a power to register in the higher rank as "surgeons." They will thus have all the privileges of the licentiate of the Hall without having earned them; and, so far as the register is concerned, they will appear with a better title than the holder of a double qualification, who may register himself only as a licentiate.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, March 25, 1845.

DR. CHAMBERS, F.R.S. PRESIDENT,
IN THE CHAIR.

On the Minute Structure of the Lungs, and the Formation of Pulmonary Tubercle; with some Observations on its Detection by a Microscopic Examination of the Sputa. By GEORGE RAINEY, M.R.C.S. Communicated by R. D. GRAINGER, Esq.

THE author, in his prefatory remarks, observes that it is not his intention to introduce any new speculations on the structure, functions, and pathology of the lungs, but only to bring forward such facts as readily admit of verification by the microscope, and to deduce from them what he considers obvious and legitimate inferences.

He divides his subject into four parts: 1st, the anatomy of the lungs as applicable to their physiology; 2d, with reference to their pathology; 3d, the mode of formation of tubercle; and lastly, its detection by a microscopic examination of the sputa.

The first division contains a general description of the lungs of the reptile, shewing the alterations they undergo as they approach in complexity the same organs in the mammal. The principal difference between the lungs of reptiles and mammals is the existence of a double layer of vessels between contiguous air cells in the former, and only a single one in the latter.

The author showed that a great difference of vascularity exists in the different parts of the same lung, those parts being least vascular which are furthest from the principal air tubes; consequently, the quantity of blood requiring the influence of the inspired air is adapted to the diminution of oxygen in the remote cells; in which he considers the renovation of their contents is due more to the law of diffusion than to mechanical dilatation and contraction of the chest.

The author describes minutely the manner in which the bronchial passages communicate with the air cells and with each other; the actual terminus of a bronchial passage

being itself a cell at the surface of a lobule, or several cells connecting one bronchial passage with another. It is further shown that each plexus of capillaries is situated in a fold of membrane forming the immediate wall of the air cells; hence the author infers there must be cellular tissue in the lungs connecting these folds of membrane together.

He combats the opinion of Mr. Addison with respect to the non-existence of air cells in the foetal lung, and shows by microscopic preparations that this opinion must be erroneous. He is inclined to deny the existence of muscular structure in the minute bronchial tubes, both from the absence of anything like muscular fibre in the pulmonary membrane, and also from the fact that the connection of the bronchi with the cells appears to be such as not to admit of any constriction of these passages, even were muscular fibre present.

A description is next given of the manner in which tubercle is formed by the deposit of tubercular matter in the air cells, occasioning by its pressure absorption of the intervening capillary plexuses, the membrane still remaining. The author remarks that the vessels close to a tubercle, and even those of the cells in which the deposit is not sufficient to cause their obstruction, retain perfectly their natural character, while those near to cells filled with fibrine from inflammation have a tortuous and knotted appearance; hence he thinks the deposit is not the result of inflammation, but merely an altered secretion. The observations on the formation of tubercle are confined to those of which the author has had the best opportunities of examining. He considers that it is only in preparations of the injected lung that the exact extent and situation of tubercular matter can with certainty be ascertained: he offers no opinion respecting miliary tubercle, having only once examined it; but the facts respecting the formation of common tubercle the author considers are unconnected with the consideration of any other form of phthisis, inasmuch as his preparations exhibit the tubercular deposit in all the different stages of common tubercle, from a quantity so small as to fill only a small part of a cell, up to that filling one, two, or even an indefinite number of cells: in all these preparations the tubercular deposit exhibits the same microscopic character.

Lastly, (from the fact that the pulmonary membrane does not become absorbed) the author proposes a method of detecting tubercular matter by a microscopic examination of the sputa. Although the observations he has made are not sufficient to enable him to speak with confidence of the practicability of this mode of diagnosis, in one

instance he succeeded in detecting the pulmonary membrane in tubercular matter washed from the trachea of a phthisical patient, with perfect ease and certainty.

Mr. Grainger bore testimony to the accuracy of the facts, and the correctness of description of the preparation mentioned in Mr. Rainey's paper. This accuracy, rather than the novelty of the views advanced, constituted the novelty of the paper, and particularly so as previous accounts of the anatomy of the lungs were deficient in exactness. Mr. Grainger then, at some length, shewed what he considered to be the facts established by the paper, and which will be found in the abstract.

Dr. C. J. B. Williams was of opinion that the portion of the paper which treated of the minute anatomy of the lungs confirmed the description of M. Bourguery, and corresponded nearly with the observations of Mr. Addison; observations which, however valuable in themselves, did not warrant the conclusions which that gentleman had drawn from them, as far as respected the first formative process of the cellular texture of the lung. He (Dr. W.) could not assent to the portion of Mr. Rainey's paper on the pathology of the lung, especially in reference to the surface of the air cells being the primary seat of the deposition of tubercle. To discover this seat in so fine an organ as the lung it was necessary to investigate a number of cases of the deposition of tubercle in its very early stage, before it had accumulated and made its way through the epithelium to the free surface of the cells. Mr. Rainey, however, acknowledged that he had examined one specimen only of miliary or incipient tubercle. On the contrary, Mr. Gulliver had unequivocally detected the opaque granular matter of tubercle in many cases in the walls of the cells, and, indeed, the plexus of vessels itself. Some of Mr. Addison's remarks were to the same effect, but he, like Mr. Rainey, had conceived the idea that tubercle was essentially altered epithelium. That tubercular matter, however, was not an altered condition of the mucous membranes was proved sufficiently by the circumstance that tubercles were found in the parenchymatous structure of organs that were without mucous membrane; such, for instance, as the spleen, the brain, in serous membranes, and in blood-vessels. He believed that the nature and origin of tubercle might be easily explained in another manner. Mr. Rainey, in his observations on the obliteration of the blood-vessels of the lung by tuberculous deposit, had been forestalled by several physiologists, particularly by M. Nalatis Guillot, whose researches proved that the obliterated vessels were often compensated by anastomosing vessels, not

only in the remaining healthy texture of the lung, but also in the pleura, and even in the outer wall of the chest itself through adhesions to the costal pleura. This fact clearly explained how it was that a few leeches, or a blister applied to the walls of the chest, often afforded such great relief in phthisis. He (Dr. W.) was surprised that the author had thought it necessary to make any observations with the view of disproving the muscularity of the pulmonary texture, the non-existence of which had been sufficiently established by his (Dr. W.'s) researches and experiments. These experiments had shown that galvanism produced no contraction in the vesicular part of the lungs, although the contractions of this agent were most evident in the bronchial tubes. He thought little of Mr. Rainey's microscopic test of the sputa. This test could only be applied during the latter stage of the disease, and after many other unequivocal signs had decided the true nature of the disease.

Dr. Kingston said that one point of interest to him, in the excellent paper that had been read, was the confirmation it afforded of the observations which he had published some years ago in the Transactions of the Society, on the vascularity of pulmonary tubercle. He had stated, what M. Lugol, of Paris, had subsequently confirmed by very extensive observation, that red vessels are sometimes to be seen under the microscope in pulmonary tubercle. The beautiful injections of tuberculated lungs, made by Mr. Rainey, afforded the same result. In some instances the tubercles admitted the injection, and displayed their vascularity; in others they had not. The invisibility of the vessels in many of the tubercles examined by Dr. Kingston, and the frequent failure of Mr. Rainey's injections to penetrate them, were owing to the extreme minuteness of the nutrient vessels of tubercles, which, except under great congestion or inflammation, did not carry red blood. Where their vessels were apparent, they appeared to be arranged in subservience to nutrition, and instrumental by their action at first, and their obstruction afterwards, in producing the various changes which took place in the progress of tubercle.

Mr. Prescott Hewett did not see how the last speaker could think that the views expressed by the author of the paper concerning the vascularity of tubercular matter agreed with his own. Mr. Rainey concluded that tubercular matter was not vascular; Dr. Kingston considered that it was. The minute vessels sometimes seen in a tubercle did not, in fact, belong to it, but were connected with the neighbouring tissues which had been entangled in the morbid deposit. In a carefully injected liver filled with large tubercles, Mr. Hewett only found

one or two small vessels passing into the tubercular matter, and this occurred only in one or two tubercles. In all the others a distinct areola of vessels might be observed encircling them so completely that the vessels of the normal tissue seemed as though they had been pushed out of their places and compressed together by the deposition of the morbid substance. Regarding the deposit of tubercular matter on the free surface of a mucous membrane, he was of opinion, with Dr. Williams, that the views of the author ought to be received with great caution, especially as Mr. Rainey had only once examined some milary tubercle under the microscope. Mr. Hewett then observed how Dr. Carswell had been mistaken upon this very point. In the pathological plates of that author was a specimen of a serofulous kidney supposed to be illustrative of the deposition of tuberculous matter upon the free surface of a mucous membrane. He (Mr. H.) had examined several similar specimens in an early stage, and had often found tubercular matter in the sub-mucous cellular tissue, the mucous membrane itself being healthy. In two or three instances also in which the mucous membrane was partially destroyed by ulceration, the tubercular matter apparently was situated upon its free surface. In the advanced stage of the disease mucous membrane had disappeared altogether. The course taken by the disease was traceable in the bladder, when it had so far extended, as all the appearances just mentioned he had several times seen in that organ. True it was that tuberculous matter was sometimes deposited upon the free surface of a mucous membrane, but this was not always the case.

Dr. Hodgkin agreed with Dr. Williams respecting the seat of tubercular deposit. He had met with this matter on the surface of glands, and in cellular membrane.

Dr. Golding Bird remarked, that Mr. Rainey appeared to have arrived at the conclusion that the lining membrane of the air-cells was truly a mucous membrane. Its pathology, however, would not seem to warrant such a conclusion. A mucous membrane during inflammation secreted mucus destitute of pus or coagulable albumen; but the lining membrane of the air-cells, in common pneumonia, poured out a quantity of albumen, and hence the scanty yellow, or rust-coloured sputa of pneumonia, coagulated when heat was applied. In the condition of grey hepatization, also, occasionally, in persons of weak power, left long after the subsidence of the acute stage, the cells were full of a substance resembling in every particular coagulated albumen. Hence, although anatomically the lining membrane of the air-cells could not be considered a serous membrane, its pathology, he believed, ap-

proached more nearly to such a structure than to a mucous membrane. He agreed in the remark of Dr. Hodgkin that it was almost impossible to discriminate between the deposit in the air-cells resulting from pneumonia, and the so-called tubercle. The microscopic test of the sputa, mentioned by Mr. Rainey, was not a novel one, and even the presence of portions of air-cell in the expectorated matter had been pointed out some time since by Dr. Buhlman, of Berne, a pupil of Professor Valentin. He had, in his Thesis on the Microscopical Structure of Expectorated Matter, figured broken air-cells as found in the sputa of a phthisical patient, mixed with flakes of cholesterine.

MICROSCOPICAL SOCIETY.

March 19, 1845.

PROFESSOR BELL, F.R.S. &c. PRESIDENT
IN THE CHAIR.

A PAPER, by Alfred Smee, Esq. F.R.S. "On Vessels in Fat smaller than the Capillaries," was read. This paper was a continuation of a former one.

Mr. Smee commenced by stating that although it was extremely difficult to ascertain precisely the original size of the capillaries, he was about to describe in the present paper another system of vessels so much smaller that it is impossible to attribute their diminutive size to any shrinking of those vessels; they are given off from them, and are distributed at every angle of each cell of fat. To these vessels he proposes to give the name of *vasa adipis*, as clearly pointing them out as appendages to fat, and also as preventing their being mistaken for the *vasa serosa* of some anatomists; the existence of which is, however, in his opinion, very problematical. The vessels now described are very minute, measuring from about $\frac{1}{10000}$ to $\frac{1}{25000}$ of an inch in diameter. They are found in every kind of fat when in its highest state of development, but do not appear until then. They exist only in fat the globules of which have assumed their polygonal form, so that it would appear the last process for the development of fat in its perfect state is the production of these minute appendages to the capillary system. It must, however, be borne in mind, that, although the term vessel has been applied to them, no evidence whatever can be adduced either of the existence of a cavity or of distinct walls. The term *vasa* is here applied to denote that a certain part exists in a definite position with certain boundaries, permeable by fluid injections, and possessing generally tolerably regular dimensions. It would also appear that their formation depends upon the two sides of contiguous vesicles leaving at their

angles a little space, which becomes converted into one of these minute vessels. Nothing has been ascertained with respect to their office.

Another paper, by Edwin Lankester, M.D. F.L.S. Esq. &c. "On some Abnormal Forms of Fungi, with Remarks on their Morphology," was read.

The fungus which led to these remarks was found by Dr. Lankester in the neighbourhood of Cheshunt, in December 1844. It was a specimen of the *agaricus personatus*, which was in a decaying state from the effects of a previous frost. It exhibited in all its parts a normal structure, with the exception of the pileus, in the centre of which, immediately over the insertion of the stipes into the hymenium, a second and smaller hymenium was developed. The gills of this were apparent, and directed towards the light; its edges were covered with a villus, which gradually united itself with that of the lower hymenium. There was, however, no appearance of any development of a stipes. On making a section of the whole plant no connection between the lower and upper hymenium was discoverable, so that the latter was evidently an independent development. Although in too dry a state to exhibit under the microscope much of the peculiarities of structure of this class of bodies, sufficient was seen to prove that, whatever might have been the character of the lower or normal hymenium, the upper one was of precisely the same nature. In accounting for this appearance, Dr. Lankester considered that in the fungi the pileus and stipes were to be regarded as the representatives of the leaves or nutritive organs in the higher plants, and the hymenium as the analogue of the flower, or reproductive organs, and consequently that the influence of cold, or of some other external agent, causing an arrest of development in the vegetable tissue of the fungus, would be attended with the development of reproductive tissue, such as we know occurs under similar circumstances in the higher forms of plants. That this view of the office of the parts is correct, he considered might be made out by passing from the fungi to the lichens, from these to the hepaticæ, mosses, and ferns, in which the green parts are undoubtedly the nutritive tissue of the plant, and the analogues of the leaves. In the fungi, however, it would appear that the whole body must be looked upon as the analogue of the flower in the higher plants, the thallus being in this family at its minimum of development. Hence, then, just as the calyx and corolla stand in the relation of nutritive organs to the more especially reproductive stamens and pistils, so the pileus and stipes stand in a similar relation to the hymenium. He

concluded with some observations upon other abnormal forms of fungi, one of which, figured by Schoffer, which presents two smaller fungi growing upon the pilius of a larger one, he considered to be produced in the same manner as double seeds or proli-ferous flowers.

ment, would render the bill just to the pro-fession, and additionally safe to the com-munity at large.

J. Butler.	J. H. Allinson.
T. Hallifax, M.D.	R. Gaut.
J. Clarke.	W. Caryl.
J. S. Turner.	W. Locke.
W. Dakin.	R. B. Penny.
W. Denne.	A. Prater.

MEMORIAL OF THE WOOLWICH PRACTITIONERS.

*To the Rt. Hon. Sir James Graham, Bart.
&c. &c.*

The Humble Memorial of the undersigned legally-authorized Medical and Surgical Practitioners of Woolwich, in the County of Kent,

Sheweth,—That your Memorialists feel grateful for your taking into consideration the present anomalous state of the medical profession, and for introducing a bill into parliament to regulate the practice of physic and surgery throughout the United King-dom.

That your Memorialists, having carefully considered the clauses of the said bill, are of opinion that the operation of the measure would be more satisfactory to the profession, and beneficial to the public, if provision were made therein that a part of the Council of Health be chosen from that class of medical practitioners to be termed licentiates in medicine and surgery, inasmuch as they are by far the most numerous, and, being entrusted with the health of a great majority of the public, consider they should have a share in making those laws by which they are to be hereafter governed.

Your Memorialists respectfully declare their belief that the relaxation of any existing penalties on unlicensed practice would tend to degrade and injure properly educated and qualified practitioners, by admitting to competition with them a multitude of igno-rant pretenders to medical and surgical knowledge, who, by insuring immediate pay-ment, would elude that part of the bill which incapacitates them to recover in a court of law.

Your Memorialists also consider that the public would be greatly injured by not pos-sessing a full and efficient protection against unlicensed practice, and that the poor, the unwary, and the credulous, would be left unprotected against the artifices of ignorant and reckless empiries.

Finally, your Memorialists beg to express their conviction, that the insertion of a clause, during the progress of the bill in committee, whereby the "visiting, prescribing, or treating diseases or bodily injuries for gain or emolument" might be made a misde-meanour, punishable by fine or imprison-

MEETING OF THE BIRMINGHAM AND MIDLAND DISTRICTS MEDICAL AND SURGICAL ASSOCIATION.

A HIGHLY respectable meeting of the Medical and Surgical Association of Bir-mingham and the Midland districts was held at Queen's College on Thursday last, to receive the Report of the Sub-committee on the Bill of Sir James Graham, for regulating the Profession of Physic and Surgery. The Chair was occupied by Dr. Birt Davies, the President; Dr. Male, though present at the meeting, being unable to preside though indisposition.—After a lengthened discussion, in which Dr. Bell Fletcher, Dr. Melson, Dr. Mackay, Mr. Davies, sen., Coleshill; Mr. W. Under-hill, jun. Tipton; Mr. Green, Mr. Knowles, Mr. F. Elkington, Mr. Harmar, Mr. San-ders, and other members, took part, it was resolved unanimously—"That the Report of the Sub-committee be adopted by this meeting, and that a copy of the Report, signed by George Edward Male, M.D. the President of the Association, be transmitted to the Right Hon. Sir James Graham by the Honorary Secretary." The following is a copy of the Report:—

"The Sub-committee appointed by the Birmingham and Midland Districts Medical and Surgical Association, having ascertained that the bill laid on the table of the House of Commons at the close of the last session was not likely to be again submitted to Parliament without considerable modifica-tion, have deemed it preferable to delay bringing the members of the Society together to receive their Report until they were enabled to lay before them a copy of the bill in the amended form in which it should ultimately be introduced by the government; and after a careful consideration of the last bill, as printed by order of the House of Commons on the 25th of January last, your Committee report, that according to their construction the objects it is proposed to attain by the bill in question are as follows:—1. To discriminate and to distinguish all persons who at the time when the bill shall come into operation may be found legally qualified to practise Medicine and Surgery.

2. To secure by adequate tests the possession of a certain *minimum* in the attainments of all hereafter desirous of acquiring a right to practise in any medical or surgical capacity; which *minimum* shall be one highly respectable in its extent, and uniform in kind; and in like manner to provide in addition an uniform and more elevated standard for all such as possess ability, time, and capital, for attaining to the *summos honores* in Medicine and Surgery.—3. To register all persons qualified to practise Medicine and Surgery, according to their respective grades, in an official record which shall be authoritative and easy of access; giving to every person so registered a right to practise, under certain conditions, in every part of the United Kingdom.—4. To make the introduction of these arrangements prospective, and, as far as may be possible, without prejudice to existing rights.—5. To recognise in a medical or surgical capacity for the public services of the State in the Supreme Courts, in the minor tribunals, and in the public institutions, those practitioners only who shall have been duly registered under the Act proposed.—6. To exempt the practice of Medicine and Surgery in all other particulars from the restraints of preceding statutes or charters; but to leave it subject, as at present, to the remedy by a civil action for the consequences of a *mal-praxis*, and responsible, as at present, to the criminal law whenever a death shall be proved to have occurred through a culpable neglect or ignorance. The power of the Apothecaries' Company to prosecute for an infringement of their privileges is also left as heretofore; and powers are given for punishing, by fine and imprisonment, whoever shall be convicted of assuming any medical or surgical style, title, or designation, if not duly registered.—7. Lastly, by the machinery of a Council of Health, it is proposed to bring all the existing bodies who are concerned in medical and surgical education throughout Great Britain under one central authority, of which it shall be the function to render their proceedings uniform, restrain the tendencies of corporate and of individual interest within proper bounds, and place the entire profession throughout the empire in a clear and definite relation to the State.

"The objects thus contemplated by the bill now before Parliament appear to your Committee to embrace the chief, if not the whole, of the great points upon which it would seem advantageous, expedient, and practicable that the legislature should, at the present time, interfere by statute in regulating the education, conduct, and privileges of the medical and surgical profession. And, after giving their best consideration to the subject, your Committee

desire to express their entire and zealous adoption of the general principles that pervade Sir James Graham's bill. But in thus concurring in those great and enlightened objects, they deem it proper to call the attention of the Society to one or two points of its practical operation in regard to which the bill may probably be susceptible of improvement.

"Respecting the offences relative to registration contemplated by the bill, your Committee would desire to see the courts distinctly specified which are to take cognizance of such offences, inasmuch as it seems to be extremely necessary that the punishment of every such offence, if susceptible of proof, should be certain, cheap, and summary; and that the invidious duty of prosecution should not be left to the extremes of zeal or indifference on the part of individuals, but always discharged under the authority, immediate or delegated, of the central power.

"Your Committee are further of opinion that the penalties attached to false pretences of qualification should, if possible, be extended to all practice in medicine and surgery by unqualified parties, and apply alike to the registered and to the unregistered; for if limited, as is proposed, to the latter only, the mere fact of registration in any grade would prevent the imposition of the penalty intended, and form a valid plea in answer of a charge of delusively pretending to higher honours to which the party had in truth no claim.

"Lastly, entertaining a strong opinion that the State is not at liberty to use for purposes merely fiscal any resources which are destructive to life, or detrimental to the health or morals of the community, your Committee desire to express their regret that no provision has been made by this bill for the suppression—either immediately or prospectively—of nostrums and secret remedies, many of which are known to exercise a baneful influence on vast numbers of ignorant and credulous persons, and for which injury the revenue produced by the stamps on such articles would seem to afford a very trifling and inadequate equivalent.

"In conclusion, your Committee desire to express their gratitude to Sir James Graham for the very able and satisfactory measure brought forward by him on a subject affecting a great variety of interests, and beset by many difficulties—a measure which they feel assured has been framed in an impartial spirit, and without other view than that of promoting the welfare of the community at large. And they recommend to the Society to adopt active measures for obtaining the support and assistance of the members of the legislature connected with

the Birmingham and Midland district in passing this bill into a law.

John Birt Davies, James Johnstone,
 Samuel Wright, Thomas Green,
 Bell Fletcher, Francis Elkington,
 William Sands Cox, *Hon. Sec.*
 George Edward Male, *President.*

REGULATIONS RESPECTING SAGES-FEMMES IN PARIS.

[We extract the following paper from the *Gazette Médicale*, in order to show how strict our neighbours are in the admission of females to practise midwifery. A great reform is on the point of being carried out, in consequence of its having been discovered by Orfila that many licensed and diplomated female practitioners in midwifery could neither read nor write. In England, where the number of these practitioners probably exceeds a thousand, there is no sort of restraint placed upon them. There is no government order for testing their knowledge either in grammar or midwifery! —*ED. GAZ.*]

Before the Clinical Hospital was established, sages-femmes were admitted to an examination in midwifery on simply presenting two certificates,—one of good moral conduct, and the other showing that they had attended a theoretical course of lectures on midwifery, delivered by a professor of the Faculty, and a second course under a private professor, or a sage-femme en chef. Practical instruction seems to have been but little attended to. It was not even ascertained whether the candidate could read and write; and loud complaints were made, that medical diplomas should have been issued to persons who had received no instruction, and “who were unable to write a few lines, without making many grammatical mistakes.”

On the establishment of the Clinical Hospital, M. Orfila was determined to put an end to the disgrace thus brought on the obstetric art; and regulations of a stringent kind were made and adopted, in order to control the admission of sages-femmes, in respect to the privileges of practice.

Thus, to obtain admission to the Clinical Hospital, the female pupil must undergo an examination:—She is made to write under dictation, and is then compelled to read what she has written. If the results be satisfactory, and she is of good moral conduct, she is admitted; if otherwise, she is rejected, or remanded for six months, in order that she may improve herself. Out of 45 who presented themselves for examination, only 7 were admitted, 3 remanded, and 35 were rejected. This regulation respecting

reading and writing is founded on a government order of the year 1807.

On admission, the pupil is compelled to attend two courses on the theory and practice of midwifery, one by a male and the other by a female professor. The pupils are divided into classes, and attend in the wards night and day. They are exercised in the “*toucher*” by the “*sage-femme en chef*,” and they have all the deliveries which occur during the night. The day-deliveries are superintended by the male pupils. They are further instructed in the treatment of women and children during and after parturition; and if they conduct themselves well for an entire year, they are admitted to a preliminary examination. Well satisfied with the beneficial results which have attended this plan at the Clinical Hospital, Orfila is endeavouring to work out the same reform in other establishments where sages-femmes are received; and it is probable that before long the system will become universal in Paris, and it will then be extended to the provinces. Hence, in a few years, obstetric diplomas will be held only by those sages-femmes who can read and write, and who have gone through regular courses of practical as well as theoretical instruction in midwifery.—*Gazette Médicale*, Mars 1845.

POISONING BY BREAD CONTAINING ERGOT OF RYE.

At the meeting of the Academy of Sciences on January 13th, a note was read from M. Bonjean, in continuation of a former communication, detailing the consequences which had resulted to a family from the use of bread containing ergot of rye.

M. Bonjean's letter gives an account of the autopsy of a child, aged 10 years, and who had undergone the operation of amputation about five weeks before death. The examination of the body was made by Dr. Pétrequin, principal surgeon to the Hôtel Dieu at Lyons.

The brain was healthy; the meningeal veins were much distended; but the membranes of the brain were not diseased. A dessert-spoonful of rose-coloured serosity was found in each lateral ventricle. The two inferior thirds of the right lung were in an advanced stage of pneumonia, and the remaining third in the second stage; the anterior and superficial part of this lung presented a single abscess, capable of containing a hen's egg. The left lung was in the first stage of pneumonia. There were neither tubercles nor small abscesses. The liver was in a perfectly normal state.

The veins of the stumps were healthy; the arteries were converted into fibrous cords for the space of about $1\frac{1}{4}$ inches from

their cut extremities, but they presented no other alteration. The nerves were thickened for some distance towards the part where they had been incised; elsewhere they appeared healthy. — *Comptes Rendus*, January 13th.

POISONING BY SULPHURIC ACID.

WE copy the following from the Times' Report. We shall be glad if any of our correspondents at Exeter can furnish us with the particulars of the case, which was tried before Mr. Justice Erle.

Western Circuit, Exeter, March 22.

Samuel Haydon was indicted for the wilful murder of Mary Haydon, his daughter, on the 19th of February.

The death was occasioned by vitriol having been poured down the child's throat, but it appeared that in that neighbourhood the poorer classes of the people were in the habit of using vitriol for many diseases.

After a lengthened trial, the Jury *acquitted* the prisoner.

[What strikes us as extraordinary in the case is, that the fact of the poorer classes of the people being "*in the habit of using vitriol for many diseases*," should be put forth as any sort of justification for a man pouring that liquid down his child's throat! This would argue the existence of a deplorable degree of ignorance in that part of England; for we should have supposed that there could have been no grown-up person who was not aware that a corrosive liquid like vitriol could not be poured down the throat of a young child, under whatever pretence, without endangering or destroying life.—*Ed. Gaz.*]

RESEARCHES

UPON THE POISONOUS EFFECTS OF SULPHATE OF QUININE.

By M. DESIDERIO.

THE conclusions deduced by the author from his numerous experiments upon animals, as well as clinical observations, are the following:—

The effects of large doses of sulphate of quinine upon the lower animals are similar in almost every respect to those witnessed in the human subject, and consist in lethargy, difficulty in maintaining the erect posture, tendency to immobility, impaired vision, falling of the eyelids.

Acetate of morphine and alcohol produce analogous effects, and if administered will consequently augment the deleterious influence of the sulphate of quinine.

On the contrary, cherry-laurel water produces an opposite effect, and within

certain limits may be considered as an antidote.

Venesection acts still more beneficially in cases of poisoning by the sulphate of quinine.

The powder of the digitalis purpurea has also appeared to exert a favourable influence in the cases referred to.—*Comptes Rendus*, February 10th.

SUDDEN ACCESS OF INSANITY.

THE following is a singular instance of the suddenness with which an attack of insanity may come on: it occurred recently at Paris. An engraver, after having spent twenty years on the engraving of a portrait, took the proofs to a publisher, who had agreed to purchase the plate. In the course of conversation some disparaging observations were made on the work. The engraver rushed into an adjoining room, and dashed his head violently against a stone chimney-piece, producing severe injury to the head, on a recovery from which it was found that his reason was entirely gone.

It was long since remarked by the celebrated Pinel, that persons endowed with highly sensitive feelings, might, by any sudden or violent emotion, be immediately deprived of understanding. Thus an attack of insanity may be caused in a moment, by extreme joy or terror. He gives the following curious instances.

During the French Revolution, an artilleryman proposed to the Council of Public Safety a new piece of artillery, which he had invented, and which was to have the most deadly effects in war. A day was appointed for the trial of this invention at Meudon, and Robespierre wrote a letter to the inventor, and expressed his approbation of the invention in very flattering terms. The man to whom it was addressed became motionless on reading it, and he was soon afterwards sent to the Bicêtre, in a state of complete dementia.

About the same time, two young men, brothers, entered the army, and during a bloody action one of them was killed by the side of his brother. The latter became instantly motionless like a statue, and lost his reason. He was conveyed to his father's house, and at the sight of him, a third son, owing to the shock produced by the death of one of his brothers and the insanity of the other, became also insane. They were for many years confined at the Bicêtre under the care of Pinel.

There is a well-known case related by Mr. Travers, (*Constitutional Irritation*), of a young lady, who was found one morning in a state of complete dementia playing with the fingers of a skeleton, which had been

placed in her bed the night before. The terror produced by the sight of the skeleton had suddenly caused the attack.

Not long since there was reported in this journal the case of a naval officer in the command of one of the ships lately forming the squadron off Cork. He suddenly rushed on deck, ordered the ship to be cleared for action, and the guns to be pointed and fired on the town. So little was insanity suspected, that his orders were about to be obeyed, when, fortunately, it was resolved to delay the execution until they were confirmed by his superior in command. It was found that this officer had been attacked with mania, the cause of which did not appear, but as it was not brought on by any sudden or violent emotion, it may have been in this instance long dormant.

The sudden occurrence of dementia, under the circumstances above mentioned, renders it difficult to suppose that this form of insanity is in all cases necessarily dependent on physical changes in the brain.

ON QUARANTINE,

AS APPLIED TO THE PREVENTION
OF THE PLAGUE.

By M. AUBERT ROCHE.

THE author, after having traced the various changes which the system of quarantine has undergone in several countries, proceeds to inquire into the effects as regards France, in a commercial and financial point of view, and concludes, that quarantine exists only to the general detriment of the interests of France. With respect to the public health, he observes that it is more injurious than useful, since, if the plague be contagious, France is by no means protected against its admission, as it may be introduced into Paris by a traveller coming from England, or a bale of merchandise from Antwerp.—*Comptes Rendus*, Jan. 13th.

RUPTURE OF THE LIVER.

A BOY fell from a coal-waggon, and the wheels passed over his body. When seen by a medical practitioner, he was insensible, and there was paralysis of the lower extremities, depending on fracture of the lumbar vertebræ, and laceration of the spinal cord. The urine and fæces had been passed involuntarily. Death took place in five hours. The most remarkable feature in the case was the entire absence of any mark of *external injury* in the region of the abdomen, which was, however, tumid. On opening the cavity a large quantity of blood escaped, and when this was removed it was discovered that the liver had been ruptured transversely throughout its whole

extent. It was completely divided, and as cleanly as if it had been cut with a knife. The hæmorrhage had evidently proceeded from the portal vessels.—(*Mr. Kingdom: Lancet*, March 22.)

[This is an interesting case, illustrating forcibly the view entertained by Chaussier, that in violence to the soft parietes of the abdomen there may be extensive internal mischief without any corresponding indication of violence externally. The reporter of the case states that there was "*not the least mark on the skin.*"—*ED. GAZ.*]

PTHISIS IN CETACEA.

M. L. Bénard, of Caen, on examining the carcass of a female porpoise cast ashore on the Coast of Brittany, found the left lung almost entirely filled with tubercles,—to such an extent that the pulmonary texture had in a great measure disappeared. There existed at the same time numerous firm pleuritic adhesions of the same side. The opposite lung was sound, and there was no trace of tubercle in any other organ. The adipose tissue was generally scanty, and of a yellowish tint. This fact, observes M. Bénard, is curious, as indicating that tuberculous masses are formed of concentric layers, which may be easily detached the one from the other. The different constitution of the skin of those animals living in a dissimilar medium from that of man, suggests various reflections as to how far disturbed cutaneous function is concerned in the etiology of pulmonary tubercles. — *Revue Médicale*, Jan. 1845.

COAL AS FUEL.

ACCORDING to Mr. Bernan, the first legal notice which we have of this useful article being employed as fuel in this country, occurs about the end of the twelfth century. In the chartulary of Newbottle, there is a grant, in 1109, to the monks, by De Quincey, Constable of Scotland, of the coal between Whiteside and Pinkie. In 1239, Henry III. granted a charter to the inhabitants of Newcastle, to dig for coal, which is the first legal mention of the fuel in England.

PREVENTION OF MILK ABSCESS.

To the Editor of the Medical Gazette.

SIR,

I MUST beg to complain of a communication from Mr. J. Paterson, of Glasgow, in your last No. He gives a quotation from Dr. Marshall Hall's "Practical Observations and Suggestions," enjoining the application of the newly-born infant to the breast with

promptitude and perseverance, as a means of ensuring safety from milk abscess. Mr. Paterson claims the plan as his own; and refers to a paper of his in the *Lancet*, May 18, 1844. On referring to the said paper, I find that it does not contain a single word, or any reference, direct or remote, to the subject treated of by Dr. Marshall Hall. I am therefore at a loss to understand why Mr. Paterson should have felt occasion to address you on the subject. Trusting to your candour to insert these few remarks,

I am, sir,

Your obedient servant,

CRITO.

March 27, 1845.

TO CORRESPONDENTS.

Mr. J. P. Garlick, of Leeds, Dr. Cooper, and Mr. Sleight, will perceive that the subject to which their letters refer is noticed in our leading article.

Prof. Gregory's communication, On a New Method of procuring Phosphoric Acid, will be inserted next week.

Dr. Kingston's request shall be attended to.

We shall be obliged to Dr. J. W. Griffith if he will forward us the papers to which he refers.

There is some truth in "Crito's" strictures on the antiquated cases.

The signatures are required to the Proceedings of the Hereford Medical Association.

Dr. Ritchie's first paper on the Ovary, &c. shall have early insertion. We should like to receive the other papers in continuation.

"An Occasional Contributor and Constant Reader," under the present bill can only register as "surgeon." Being a graduate of the University of Leipzig, he possesses no legal title to practise as a "physician" in England, and cannot, therefore, be registered as such. We would advise him to wait until the bill becomes law. If he can satisfy any of the Colleges of Physicians that his diploma has been obtained *bonâ fide*, by residence and examination, we do not think he will experience any difficulty in acquiring a legal right to register as a physician without undergoing an additional examination. See the latter part of the 16th clause.

Communications have been received from M.D., Mediator, Omicron, Dr. T. Mayo, Dr. Ritchie, Mr. R. H. Meade, of Bradford, Mr. Dermott, Mr. Benton, Mr. H. Lee, and Mr. G. B. Childs.

APOTHECARIES' HALL.

Gentlemen who have obtained Certificates, March 27.—J. Brown, Bridgenorth, Salop.—W. H. Benson, Whitehaven, Cumberland.—S. G. Downing, Congleton, Cheshire.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

List of Gentlemen admitted Members, March 28.—A. J. Vandenberg.—R. Bryden.—P. Hudson.—E. C. De Crespigny.—J. G. L. Marsh.—H. T. Lomax.—J. E. Taylor.—J. Foster.—J. Moore.—J. H. Gandy.—J. Atterbury.

MORTALITY OF THE METROPOLIS.

Deaths from all causes registered in the week ending Saturday, March 22.

ALL CAUSES 1197
SPECIFIED CAUSES 1196

I.—Zymotic (Epidemic, Endemic, and Contagious) Diseases, 173; among which, of—

Small Pox	28
Measles	25
Scarlatina	27
Whooping Cough	31
Croup	9
Thrush	4
Diarrhœa	8
Dysentery	4
Cholera	0
Influenza	3
Typhus	24

II.—Dropsy, Cancer, and other Diseases of uncertain or variable Seat, 114; among which, of—

Hæmorrhage	2
Dropsy	22
Scrofula	0
Cancer	10
Atrophy	18
Debility	27
Sudden Deaths	23

III.—Diseases of the Brain, Spinal Marrow, Nerves, and Senses, 180; among which, of—

Hydrocephalus	41
Apoplexy	30
Paralysis	25
Convulsions	52
Insanity	1
Delirium Tremens	2

IV.—Diseases of the Lungs, and of the other Organs of Respiration, 411; among which, of

Pneumonia	89
Hydrothorax	8
Asthma	64
Phthisis or Consumption	160
Diseases of the Lungs, &c.	23

V.—Diseases of Heart and Blood-vessels 49

VI.—Diseases of the Stomach, Liver, and other Organs of Digestion, 99; among which, of—

Teething	22
Gastritis	1
Enteritis	20
Tubercles	12
Hernia	5
Disease of Stomach, &c.	7
Disease of Liver, &c.	10

VII.—Diseases of the Kidneys, &c. 12

VIII.—Childbirth, Diseases of the Uterus, &c. 13; among which, of—

Childbirth	8
Disease of Uterus	3

IX.—Rheumatism, Diseases of the Bones, Joints, &c. 9

X.—Diseases of Skin, Cellular Tissue, &c. 1

XI.—Old Age 89 |

XII.—Violence, Privation, Cold, and Intemperance 46 |

WILSON & OGILVY, 57, Skinner Street, London.

THE LONDON MEDICAL GAZETTE,

BEING A
WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

FRIDAY, APRIL 11, 1845.

DR. HARE ON LIEBIG AND HIS CHEMISTRY.

IN a recently published letter, one of the admirers of Liebig has described him to be in chemistry "what Newton and Laplace were in astronomy and mathematics!" He is also said to be not so much an expounder of chemistry, or an operator in chemistry, as *Chemistry* itself! There are always two sides to every question; and as we have now been accustomed for a very long time to hear nothing but the most fulsome adulation of Liebig, even from men who ought to boast of being countrymen of a Davy and a Faraday, we only think it fair to quote the sentiments of one whose views are not likely to be biassed on the subject. We extract the following remarks, which, in our judgment, give a fair exposition of Liebig and some of his doctrines, from an introductory lecture delivered by Dr. Hare, Professor of Chemistry in the University of Pennsylvania. We believe that the lecture itself has had only a limited circulation in this country, although it deserves to be extensively read.—ED. GAZ.

In these, *i. e.* his [Liebig] physiological speculations, I conceive he has in various instances been bold, hasty, inconsiderate, and inaccurate*, but still, has advanced many ingenious ideas which are likely to be highly serviceable to physiological chemistry. He has quite as much merit in holding up ideas, before existing, in a new and popular form, as in suggesting such as are altogether original. Yet I would liken him to a military leader, who, after marching through a country, with drums beating and colours flying, should have his trumpets loudly sounded, as if a complete conquest had been effected;

* For what I consider as a palpable instance of an inversion of the truth, I refer to my "Pamphlet on the salt radical theory," page 21. Also Silliman's Journal, vol. xlv., page 259, Oct. 1843.

while leaving behind him many fortresses, of which the knowledge had prevented more cautious and considerate leaders from having previously undertaken the same expedition. Nevertheless, the philosopher of Giessen has excited a degree of attention in the great mass of physicians and agriculturalists which had never been gained had he neither deluded himself, nor the readers of his essays, with the prospect of an elucidation of the mysteries of animal and vegetable physiology, which it is beyond the present state of chemistry to afford. Moreover, the popularity which he has thus gained may lead others in the same path, who may rectify his errors, and remedy some of his omissions, without impairing what is really true in his doctrines.

There can be no better exemplification of the errors to which Liebig is addicted than his adoption of the following maxim:—"*There are many ways to the highest pinnacle of a mountain, but those only can hope to reach it who keep the summit constantly in view.*" It must be evident to every person of any experience in ascending mountains that although it may be necessary to keep the bearing of the summit in mind, our eyes must be upon the path; and that in most cases the safest and easiest mode of access causes the summit to be concealed for a time. A person who should implicitly follow Liebig's advice would probably fall over some precipice, or tumble into some fissure which might escape notice while keeping the summit of the mountain *constantly* in view. Is not the fallacious rule of action above quoted a good figurative illustration of a theorist, who, keeping his mind too much upon some hypothetical acme, overlooks insurmountable objections which a close attention to facts would make evident? Has not Liebig exemplified his own course?

Some of the excellent practical suggestions with respect to agriculture which are to be found in Liebig's work, are not the less worthy of being tried in practice because

they owe their origin to Sir Humphry Davy. I allude to the necessity of attending to the chemical constitution of soils and manures, so that one may be of a nature to correct the defects of the other. All that Liebig alleges of the reagency of gypsum, of ammonia, bone, earth, urine, carbonic acid, and of the alkalis, seems to me well worthy of attention, though partially inconsistent with the experimental inferences of Dr. Jackson, a distinguished American chemist*.

Ordinary fires being supported by the union of atmospheric oxygen with the charcoal and the hydrogen of fuel, while the respiration of animals is attended by a union between atmospheric oxygen and the carbon of the blood, it has long been apparent that a large consumption of oxygen must be thus necessarily occurring. On the other hand, the observation, that from the leaves of vegetables exposed in water to the solar rays, a copious emission of oxygen ensued, and the fact that carbon was found largely to enter into their composition, led very naturally to the inference that animals inspire oxygen, and give out carbon; while vegetables, respiring the gaseous compound formed with carbon by oxygen, called carbonic acid gas, emit oxygen, retaining the carbon.

But some contradictory observations had caused this view of the subject to be represented as incorrect; and the question has always been undecided. Liebig has, with great ability, taken that side of this question, to which I have always adhered†. He considers that the carbon in vegetables is due to the absorption of carbonic acid, and infers that it is thus that the enormous consumption of oxygen by fires and animal respiration is compensated. He shows by calculation that, agreeably to analysis, there are three thousand millions of millions of pounds of carbon in the air in the state of

carbonic acid, and infers that the carbon in all the mineral coal known, bears but a small proportion to that thus existing in the aeriform state.

It is known that inland plants yield by incineration, potassa, the active matter of common soap ley. Plants on the borders of the ocean yield soda, an analogous substance. In various species of grain certain salts are found to exist always in a certain ratio. Now, however minute are the proportions of these substances, Liebig correctly avers, as I believe, that their absence incapacitates a soil for the successful cultivation of the kind of plant requiring them.

This distinguished chemist concurs with the celebrated Davy in representing plants as taking up all soluble matters presented to their roots in a sufficiently diluted state, but appears to be peculiar in the opinion that it is only that portion of carbon which is in the state of gaseous carbonic acid which forms their food.

According to Davy, Berzelius, and others, vegetable matter, constituting humus or *geine*, yields certain acids, which, being absorbed, are the means of nutrition. But both Davy and Liebig, the latter especially, consider that carbonic acid is imbibed by the vegetable foliage, the carbon being assimilated and the oxygen exhaled. Of course water is all-important, and appears to be received through the leaves as well as the roots.

Lignin, which constitutes the fibres of wood, hemp, flax, and those of plants in general, also sugars, gum, starch, and other analogous vegetable products, consist merely of water and carbon. Nitrogen exists in plants in comparatively small proportion; yet its presence appears to be of primary importance, since it has a sort of ubiquity in the organs and juices. But although this element forms nearly four-fifths of the atmosphere, it seems to be generally conceded, and is by Liebig urged, that it is not directly obtained from that source by vegetation. According to this philosopher, a previous conversion into ammonia, by a union with hydrogen, is requisite; this alkali, and the carbonic acid with which it unites, when exposed to the atmosphere, being mainly the food of plants. But though nitrogen pervades vegetable organization, it abounds in a larger proportion in that of animals: hence it has been a question how animals, *feeding on vegetables only*, are supplied with a sufficiency of nitrogen. It naturally occurred, in the case of vegetables, that they might derive it from the atmosphere during respiration; but experimental investigation has shown that there is no absorption of nitrogen during that process tending to justify this inference.

Thus, in the supply of nitrogen to the vegetable and animal kingdom, Nature, from

* Doctor Jackson is of opinion, that the ammoniacal salts act in a different way from that stated by Liebig—that the carbonate of ammonia acts upon the organic matters of the soil, and renders the organic acids neutral and soluble—decomposes and renders inert noxious metallic salts and other compounds.

Dr. Jackson objects that Liebig has not produced any instance where a plant has been raised by a solution or other preparation of ammonia in a purely silicious or other pure earthy soil. This question is, therefore, open for research, and experiments have been instituted to decide it. (That ammonia, in the state of carbonate, or in solution in water, has a great effect in stimulating plants, has long been known to gardeners; but they also know that the plant so treated soon perishes. It would seem to be an analogous case to that of plants stimulated by chlorine, but not supplied with a proportionally increased allowance of food).—Webster's edition of Liebig's Organic Chemistry, p. 411.

† This side of the question has been experimentally supported by Professor Daubeny, of Oxford, England.

considerations which are inscrutable to human reason, prefers an indirect and precarious source to one which is superabundant and always at hand. Nor is this the only instance. Fishes, which swim in an element consisting of eight parts in nine of oxygen, are dependent for this principle on the contact of their gills with a minute portion of air absorbed from the atmosphere.

But Liebig alleges that, as a large portion of vegetable diet merely serves to yield the carbon required for respiration, there is, in the residue, a due proportion of nitrogen forming flesh and blood; since it has been shown by recent analyses that in beans, wheat, and other grain, there are substances capable of isolation which are identical in composition with the fibrous matter of the blood or fibrin, and with serum or white of egg, called albumen, also with milk curd or casein. Thus animals find ready formed in some parts of vegetables, if not in all, the ingredients of their flesh and blood. But some of the most abundant articles of vegetable food, such as sugar, starch, gum, fat, oil, &c., being devoid of nitrogen, cannot alone contribute to the formation of flesh. They go, says Liebig, to support the fire in the lungs, where thirteen ounces and a half of carbon are, on an average, daily consumed by a man, causing as much heat as would raise three hundred and seventy pounds of water to the temperature of the blood.

It is alleged by the same author that all the oxygen, thus combined with carbon, is in the first instance taken up by the protoxide of iron in the venous blood, which, being consequently changed in colour, causes the reddening of the blood ere it passes into the arteries. To this it has been objected that the quantity of iron in the blood is inadequate to take up a sufficiency of oxygen; and it appears to me that were the fact to be as suggested, the heat would be evolved in the lungs, where the absorption of oxygen takes place; not in the capillaries, where it is transferred to carbon.

Moreover, I am of opinion that, as protoxide of iron is of a more dingy red than arterial blood, it would be incompetent to colour this liquid, as alleged, unless assisted by some other agent, such, for instance, as sulpho-cyanhydric acid, which has been heretofore represented as participating in the result.

It would seem, on the whole, that Liebig has, in this respect, contributed more to *enforce* than to *alter* the opinions offered by me on this subject in the former editions of my text-book. Yet I have always thought that a machinery so complicated as that employed in the process of respiration could not have been devised merely for the generation of animal heat or the oxidisement of

carbon in the tissues, as Liebig seems to believe. It has struck me that the necessity of atmospheric oxygen to fishes would hardly be ascribed satisfactorily to the ponderable matter thus received through their gills, or any heat which it may produce. I have suspected that there was some imponderable fluid, supplied to the nervous system by the process in question, to which the classes of animals, enjoying the benefits of it extensively, are indebted for the superiority over those which do not enjoy that advantage to a similar extent.

One of the greatest services rendered by the author whose opinions are under consideration, is, as I think, in directing attention to the different offices performed by two classes of vegetable products which may be distinguished as nitrogenised and as devoid of nitrogen. All the various species of sugar, starch, gum, or mucilage, oil, fat, and gelatine, are represented as having a tendency rather to go to the support of the respiratory process, or to produce obesity; while the fibrin and albumen of flesh and blood are sustained by those portions of animal and vegetable food which contain nitrogen in nearly the same proportion as it exists in them. The greater vigour of a horse when fed on oats or maize is in this way explained, by the greater proportion of matter contained in such grain, which is of a nature to compensate the wear of the muscles.

Highly worthy of consideration, also, are Liebig's suggestions respecting the services rendered by theine, a peculiarly highly nitrogenised principle, common both to tea and coffee. Liebig ingeniously shows that this principle requires only an addition of water and oxygen in order to convert it into taurine, an active principle of the bile. The extensive use of tea and coffee by civilised nations thus appears to have been the result of a sort of instinctive empirical research, leading to beneficial results, which physicians were heretofore unable to appreciate or explain. In fact, as food, coffee and tea were heretofore considered as almost valueless; but now it appears that they serve to furnish nitrogen in a more concentrated form to those whose indolent habits might be incompatible with the consumption of sufficient quantity of ordinary nutriment to obtain a requisite quantity of that element.

There is nothing which seems more completely impenetrable to the human mind than the power of vitality. Probably in no instance is this power better exemplified than in the changes which, by means of the vital spark, take place in seeds and eggs. In the latter, especially, the principle of life seems to hold in check those chemical affinities which, so soon as it is extinct, convert into a putrid mass that which, life enduring, would be

transformed into a young bird. The vital power of animal and vegetable organisation not only counteracts the conflicting affinities of inorganic atoms: it also endows groups, constituted of little else than three or four of those atoms, with powers analogous to those inherent in simple elementary atoms, and thus extends immeasurably the bounds of useful chemical reaction.

I infer that the organs of animals and vegetables have two modes of effecting the object for which they were created. In one mode, in which chemical reaction would fail to accomplish the requisite transformations, being such as affect masses rather than their component atoms, the organs react directly, in a mode entirely hidden from our view. There is, as Liebig justly alleges of such phenomena, an invisible cause. In the other mode, creating such chemical compounds as are suitable for their purposes, it may more or less leave to these the issue.

Liebig asserts "that we shall obtain that which is obtainable in a rational inquiry into nature, if we separate the actions belonging to chemical powers from those which are subordinate to other influences;" but the learned author does not show us how we may accomplish this separation; and probably for the best possible reason, that, great as are undoubtedly his skill and his genius, he is incompetent to effect any such separation. He seems to forget that he elsewhere admits "chemical powers to be subordinate to other influences, whether of life, of heat, or electricity." To me it seems, that to separate the action of these powers from such as are subordinate to other influences, would involve their separation from themselves; and that it were inconsistent to suppose that chemical agents, which are created by the vital power, cannot be also modified by it so long as it prevails.

"But," says this distinguished author, "the expression vital principle must, meanwhile, be considered as equivalent to the terms 'specific' and 'dynamic' in medicine. *Everything is specific which we cannot explain, while, by the epithet dynamic, everything is explained which we do not understand.*"

This disparaging language, as respects the power of life, seems not to be quite consistent with the following opinions elsewhere stated by the celebrated author.

Our notion of life involves something more than merely reproduction—namely, the idea of an active power, exercised by virtue of a definite form and production, and generation in a definite form. By chemical agency we can elaborate the constituents of muscular fibre, skin, and hair, but by such means are enabled to create no organised tissue, no organic cell. The production of

organs, the co-operation of a system of organs, and their power not only to produce their component parts from the food presented to them, but to regenerate themselves, in their original form and endowed with all their properties, are characters belonging exclusively to organic life, and constitute a form of reproduction independent of chemical powers. The chemical forces are subject to the invisible cause by which this form is produced, and of the existence of which we are made aware only by the phenomena which it induces. Its laws must be investigated just as we investigate those of other powers which produce motion and changes in matter. The chemical forces are subordinate to this cause of life, just as they are to electricity, heat, and mechanical force. Such is the influence, and no other, exercised by the vital principle over chemical forces."

Thus the author, notwithstanding his contemptuous allusion to the vital principle, and his confounding it in value with words alleged by him to be insignificant, in the passage last quoted, justly ascribes to the principle in question a prodigious efficacy.

In the following passage Liebig's mode of reasoning is exemplified:—"Is it truly vitality which generates sugar in the germ for the nutrition of young plants, or which gives to the stomach the power to dissolve and prepare for assimilation all the matter introduced into it? A decoction of malt possesses as little power to reproduce itself as the stomach of a dead calf; both are unquestionably destitute of life, but when amylin or starch is introduced into a decoction of malt, it changes first into a gummy-like matter, and lastly into sugar. Hard boiled albumen, and muscular fibre, can be dissolved in a decoction of a calf's stomach, to which a few drops of muriatic acid have been added, precisely as in the stomach itself. The power, therefore, to effect transformation does not belong to the vital principle. Each transformation is owing to a disturbance in the attraction of the elements of a compound, and is, consequently, a purely chemical process."

But is there any truth in the allegation that in no other than a chemical process can there be any disturbance in the attraction of the elements of a compound? Is it by a chemical action that an electrical current subverts chemical affinities? Is it by a chemical action that vitality endows chemical compounds with peculiar attractive powers? Has not Liebig sanctioned the opposite idea in the passages which I have cited?

HÆMORRHAGE FROM STOMACH, AND DEATH, FROM SWALLOWING A COPPER COIN.

To the Editor of the Medical Gazette.

SIR,

If you think the accompanying case worthy a place in your valuable journal, I shall feel obliged by your inserting it.—I am, sir,

Your obedient servant,

PERRY DICKEN, M.R.C.S.

Ashby-de-la-Zouch,
Leicestershire.

A. B., a boy 10 years of age, was amusing himself by throwing some half-pence into the air and catching them in his mouth, when one of them accidentally slipped into the œsophagus and was swallowed. Considerable effort was made to dislodge it, but without avail, and it passed into the stomach. This took place on the 16th of January, 1845. A medical man in the neighbourhood was immediately sent for, but from the very slight disturbance it produced, it seemed at first very doubtful whether the halfpenny had been swallowed or not. Purgatives of an oleaginous character were exhibited for several days, in order to dislodge it from the stomach, but no appearance of the coin was observed in the secretions from the bowels. He continued his usual occupations, and attending his school duties as before, occasionally, however, complaining "of a sense of weight and uneasiness in the epigastric region, and rather towards the right side, and sense of distension after meals," which, however, generally subsided in the course of three or four hours. He continued much in the same state until the night of the 12th February, when, after being in bed a short time, he was suddenly seized with sickness, and instantly vomited a large quantity (more than a quart) of fluid arterial blood. The hæmorrhage continued at intervals through the night, but was checked by giving large doses of tartrate of antimony, which considerably depressed the action of the heart. On the next day (the 13th) the bleeding again recurred to a great extent, and after throwing up a considerable quantity of dark fluid, he became sensible (as he described it at the time) "of something passing the stomach,

and thence into the bowels." A temporary relief was obtained, and sanguine hopes were entertained that the mischief was arrested, but the hæmorrhage again recurred, and he suddenly sank on the evening of the 14th, in a state of complete collapse.

Examination thirty-six hours after death.—Body presented externally a complete state of paleness from draining of blood. On opening the stomach a circular ulceration of the mucous surface was observed, corresponding exactly in size to the halfpenny, but at a considerable distance from the pyloric orifice. The surrounding coats of the stomach did not exhibit any unusual vascular appearance, nor were any traces of inflammatory action observable in any other part of the organ. The coin had evidently escaped through the pylorus. On tracing carefully the track of the whole alimentary canal from the duodenum to rectum, the halfpenny was discovered at the very termination of the colon, lying loose, and easily removable; in fact, its situation was such that it would in all probability have been voided by the next evacuation from the bowels. Not the slightest alteration of structure, or any abrasion of any other part of the mucous surface of the alimentary canal, existed, or any other morbid appearance.

REMARKS.—There are, I think, in this case, some circumstances worthy of notice. 1. As to the length of time which had elapsed from the swallowing the coin to its passing through the pylorus. 2. As to the hæmorrhage. 3. As to the effect produced upon the vital organ by its presence. 4. As to the treatment pursued.

It will be seen on a review of the case before us that a period of nearly a month had elapsed from the coin being first swallowed to any material disturbance having taken place; during the whole of which time little was complained of, excepting a sense of occasional uneasiness in the region of the stomach, generally, however, much increased for three or four hours after taking food; his spirits were good, and appetite as usual, up to the day when he was seized with more alarming symptoms. The pain appeared to be more from "mechanical weight" than from any other disturbance produced

by its presence in the system. I should be much disposed to think that the coin was in some way spasmodically retained by the muscular contraction of the stomach, for the ulcerated surface was at a considerable distance from the pyloric orifice, and I can see no explainable reason why this foreign substance should not have passed into the bowels, and so have been voided *per vias naturales*.

As respects the hæmorrhage, I am I own still at a loss to account for such an amount of blood as was poured out in the three days preceding his death; and, had it not been for a post-mortem examination of the body, I should have been in great doubt as to whether the hæmorrhage was caused by the presence of the "foreign body" in the stomach, or to some other accidental circumstance: there can be little doubt, however, that in some way the action of the coin was immediately connected with the rupture of some vessel, and that its detachment from the situation in which it was lodged, and its passage through the pylorus, evidently led us to such a conclusion. The time when the halfpenny became detached, and was changing its situation, was forcibly described by the little patient (who was an extremely intelligent boy); and he expressed himself as immediately relieved after its passage.

As to the fatal termination of the case. This appears to me to be also a matter of speculation. Abstractedly considered, I cannot see any positive reason why a substance like the one swallowed should have been the immediate cause of death. Many cases are on record of buttons and other analogous substances being frequently swallowed by accident, but I am not aware of any case of a precisely similar nature to the foregoing being mentioned, although I doubt not many such have occurred. At first some apprehension was felt lest any poisonous influence from the action of the copper on the system might be felt, but there did not appear to be the slightest foundation for such an idea; indeed, the halfpenny, when taken from the body, exhibited not the slightest alteration in appearance, and the letters on the coin, &c. were perfectly visible.

Lastly, as respects the treatment. The first object appeared to be (supposing the coin had been actually

swallowed) to endeavour to dislodge it from the stomach, and to pass it through the intestinal canal: this purpose was attempted by giving purgatives of castor oil, common oil, &c., but as there was no appearance indicative of its passage after a few days, and the symptoms not appearing to demand a continuance of medicine, all treatment was suspended, and, until the hæmorrhage occurred on the night of the 12th February, nothing active was resorted to. The chief indication then appeared to be to arrest the bleeding, which, by the treatment pursued, was considered probable would be the case. The recurrence, however, of the discharge, accompanied with the suppression of vital powers, appeared to be more than the system could bear up against, and he rapidly sunk from a complete state of exhaustion.

I leave it to any of your readers to say whether they could suggest any plan in a similar case where any treatment could be of service in discharging the substance swallowed.

SOME OBSERVATIONS
ON THE
MEDICAL TOPOGRAPHY, CLIMATE,
AND DISEASES,
OF THE
BIGHTS OF BENIN AND BIAFRA,

WEST COAST OF AFRICA.

BY W. F. DANIELL,
Member of the Royal College of Surgeons of
England, &c.

[Continued from p. 709.]

The Bight of Biafra.

THE Bight of Biafra, known by the early English writers on Africa as the Ethiopic Gulf, commences at Cape Formosa, and embraces the whole of the coast between it and Cape Lopez, situated in Lat. $36^{\circ} 10' S.$ and $8^{\circ} 40' E.$ Long. In physical appearance it varies but little from the usual cheerless prospect of the alluvial lowlands which here, as in other regions, are densely covered by impervious mangrove forests. A limited tract of land near the equator is, however, of a more elevated character, and includes the mountainous districts of Qua, Rumby, and Camaroons, which, with the adjacent islands of Fernando Po, Princes, and St. Thomas, are of volcanic formation. The rivers in this are more nu-

merous and of greater size than in the preceding Bight; they generally derive their origin from the upper belt of table lands of the interior. The largest of them are much resorted to by European vessels of considerable tonnage, which export from the more fertile and cultivated inland countries immense quantities of palm oil, with ivory, and other mercantile productions. The legitimate commerce that has recently sprung up since the suppression of the slave trade is one now annually increasing in importance, and will eventually become extremely lucrative and valuable to the commercial interests of Great Britain.

The ardent love of adventure which stimulated the Portuguese to send forth those enterprising expeditions for the discovery of unknown empires in all quarters of the globe, seems to have been conspicuously directed, towards the middle and close of the 15th century, to the east and west coasts of Africa. A reference to the history of those periods will furnish us with the records of several expeditions exclusively undertaken with the view of exploring this and the other divisions of Western Africa, then described as North and South Guinea. Even at such an early date as 1459, a very curious map, constructed by a Venetian named Fra Mauro Canaldolese, professes not only to delineate the shores of these Bights, but also the probable southern termination of the African continent, although the Cape of Good Hope was not discovered by Bartolomew Diaz till 1486, who then termed it "Cabo de todas los tormentos*." Time since then has proved very unpropitious to the supremacy of the first discoverers of these countries, since only two of their original colonial possessions in the Bight of Biafra, the islands of Princes and St. Thomas, now remain attached to the crown of Portugal.

The Rio Nun, familiarly termed Brass River by the Europeans in the Bights, is also recognised by its native appellation of Quorra, or Kowara. It is situated eight miles from the Sengana, and is the first stream that engages the attention of the voyager. The entrance, near two-thirds of a mile in breadth, can only be discerned at short distances from seaward in consequence of the flat and marshy aspect of the

land in its immediate vicinage. The western point of the shore, at its junction with the ocean, has received the title of Cape Nun, and the other, or opposite one, that of Cape Filana. This river resembles most of the others in the Delta, in the dreary and monotonous features of the landscape, which are those calculated to inspire anything but a favourable impression as to either its scenery or salubrity. On both sides, for a brief space, a narrow beach of sand skirts the forest jungle, and is superseded by accumulating banks of vegetable and alluvial detritus, enveloped by numberless mangrove bushes that project to a greater or less extent beyond the water's edge. A few miles from the bar on the left shore, partially intermingled with cocoa-nut palm and plantain trees, is Pilot's Town, or Cassah; while, deeper inland within the woods, is another village containing about an equal number of mud-huts of the most wretched construction. It can only be approached by intricate by-paths, and is also entitled Cassah, or Acassah. On the eastern bank, nine or ten miles from Cape Filana, is a creek which connects this river with the St. Bento, and through which the slave-factors transmit their prohibited cargoes when the river is blockaded by any armed vessel. This creek likewise leads, by means of divergent branches, to the town of Brass, and is the ordinary route taken by the fishing canoes when passing from one river to the other. Eboe, or Ibue, the long Eboe of the Bonnians, is 120 miles inland, and the confluence of the Tchadda with this river, and the Felatah town of Rabbah, are respectively 152 and 313 miles to the northward of Eboe. The inhabitants of the Brass towns, similar to other people of Eboe derivation, are addicted to those barbarous fetish rites and superstitious beliefs that characterise the nations of the adjoining rivers in communication with them. These ceremonies, through the ministry of their Jujunen, or priests, they render subservient to the treatment of the painful maladies to which they are liable. The most prevalent are confined to the cutaneous tissues, and these, with morbid affections of the abdominal viscera, comprise the greater proportion of the endemic diseases of these habitable morasses. In the countries bordering the superior course of this stream,

* Cape of all torments.

Mr. Oldfield remarks that the diseases which came under his observation were "large ulcers from the bites of mosquitoes, diarrhœa, dysentery, variola, ophthalmia, and cataract; the further we advanced into the interior, the more common we found cataract; at Rabbah I saw several hundred cases of double cataract; most of the natives were willing to undergo the operation; as we were not making a sufficient stay, it was not attempted.—The natives of Rabbah, and the neighbouring towns and villages high up the river, more especially where Mahomedanism prevails, are very cleanly in their habits, performing their ablutions twice a day: there were very few cases of cutaneous diseases among them."* Of the indigenous products exported from this river, palm oil is the one alone estimated as worthy of the notice of the white trader. Some ivory, pepper, and dyewoods, may be occasionally obtained, but not in such quantities as to bring a sufficient remuneration for the outlay and trouble taken in procuring them. The sand bar at the mouth of the river has only two fathoms of water on it at full tides, and is therefore an obstacle to any vessel above a certain burthen. The oil carried away by the few which now frequent it seldom amounts to more than six or seven hundred tons during the year, inasmuch as the Eboe traders manage to monopolize nearly the whole produce of the inland districts to send to the Calabar and Bonny markets. This stream, though not so unhealthy as the Rio Formosa, is nevertheless one eminently deleterious to the unacclimated European. The mortality among the crews of the shipping averages at least from twenty-five to fifty per cent.

It would not come within the object of these papers to enter into any descriptive outline of the topography and natives of the many inland kingdoms that are scattered upon the banks of this river, but it may perhaps be requisite in a medical point of view to cast a retrospective glance on those naval expeditions that have been undertaken for the development of their commercial capabilities and resources. Centuries upon centuries have elapsed since this river, known as the Niger of

the ancients, first became the subject of manifold interesting and profound controversies. Herodotus, Strabo, Ptolemy, Abulfeda, Edrisi, with Leo Africanus, and a host of more modern writers, have vainly essayed to dispel the mysterious gloom in which its origin and termination were enshrouded. The number of hypothetical treatises and dissertations, the memorials of successive ages, would alone suffice to demonstrate that these points constituted a geographical problem the most difficult of solution. The exploratory researches, however, of Park, Clapperton, and the Landers, in 1831, have at length partly set at rest this famous and long disputed question.

No sooner had the discovery of the Landers been promulgated that the Rio Nun was the chief outlet of this river, and its ascent was practicable by vessels of moderate tonnage, than an expedition was immediately fitted out at Liverpool with the intention of testing how far the experiment might succeed. It consisted of two steamers, the Quorra and Alburkah, with the Columbine brig tender. These vessels crossed the bar on the 19th of October, 1832, and progressed some distance into the interior before the endemic agencies manifested their morbid effects, which commenced from the twenty-third day after their ingress. Pursuing their mercantile avocations with but indifferent success at the various country markets throughout the years 1833-34, and after penetrating as far as Rabbah on the Quorra, and Fundah on the Tchadda, it was finally abandoned, having proved a complete failure. Out of forty-eight white persons composing their complement of Europeans, only four survived the pestilent sickness of the country; among these were McGregor Laird, Esq., Capt. W. Allen, R.N., and Mr. Oldfield, one of the medical officers; the other, Dr. Briggs, having unhappily fallen a sacrifice to his arduous exertions. To one of the talented projectors of this enterprise, and Mr. Oldfield, we are indebted for the history of the primary effort to establish a commercial intercourse with central Africa by means of the navigation of the Quorra. The predominant maladies which conspired to create the great mortality on board were dysentery and those adynamic remittent

* London Medical and Surgical Journal, Vol. viii. p. 406.

fevers common to the other rivers of Western Africa. The Quorra steamer having been purchased by the West African Company, reascended this river in September 1835, and proceeded to the confluence of the Tshadda, under the charge of Mr. Becroft. During a sojourn of three months inland, two out of five men were cut off by the insalubrity of the clime, one of whom, a creole, of Antigua, had been long suffering from organic disease of the lungs. In 1840, the *Ethiope*, a steam vessel, expressly equipped for the coast of Africa, by Mr. Jamieson, of Liverpool, and also under the command of Mr. Becroft, after surveying the Rio Formosa and determining its sources, entered the Quorra by the anastomosing branch below Eboe, and explored the river as far as Lever, the highest point hitherto attained by any vessel. Out of twelve white individuals, the loss of life amounted to five, three men and two boys, which, considering the lengthened period of six months, may be deemed as comparatively moderate, if contrasted with the mortalities of the other expeditions. The germs of the disease and their subsequent development are solely to be ascribed to their protracted exploration of the humid regions of Benin. The last and most unfortunate expedition, the disastrous result of which will remain fresh in the memory of most, was sent forth under the auspices of the British Government in 1841, on a scale of proportionate magnitude and liberality, with the view of forming a series of treaties with the native chiefs for the suppression of slavery. Three steamers, the *Albert*, *Soudan*, and *Wilberforce*, with the *Amelia* tender, composing this armament, passed the bar on the 13th and 15th August, and after a very injudicious delay of several days at its entrance, steamed up the river. The remittent and other fevers of the country began to display themselves from the 4th September, and continued from that date to gradually affect the majority of their European crews. These diseases still maintaining their alarming ravages, and even appearing rapidly to gain ground, it was ultimately thought advisable to transmit the *Wilberforce* and *Soudan* through the Delta into the ocean with the sick, and the *Albert*, shortly after reaching Egga, was compelled to follow from the same

pestilential causes. During the trifling period of seven weeks, almost every white person on board was prostrated by sickness. Out of 145 Europeans, no less than 130 were attacked by disease, and 43 fell victims to fever, exclusive of casualties. The *Albert* lost on the whole 26, the *Soudan* 14, and the *Wilberforce* 13 men; total 53. Now as this expedition was avowedly conducted upon hygienic principles, it came of course under the criticisms of the medical practitioners resident in Africa, who from their intimate knowledge of the climate and diseases of these countries might be deemed as fully authorised to express their opinions upon these subjects. Accordingly, in the outset, the selection of the most unhealthy season for the commencement of their operations, with the inefficiency of the precautionary means adopted for the preservation of the health of their crews, rendered it an easy matter for them to predicate its unsuccessful issue. It was afterwards pointed out that in various instances the medical arrangements evidently betrayed but an imperfect acquaintance with the nature and effects of those endemic influences so fatally exemplified in the consequent sickness and mortality. The horror of malaria was carried out to such an excess as to keep in full play Dr. Reid's "ventilating and medicating apparatus," with which each vessel was supplied, forgetting that when the men emerged from the purified compartments below, they were exposed upon deck to the moist and tainted atmosphere of the swamps. In order to obviate this inconvenience it was stated in the general orders that "those who were obliged to be on deck on duty will be supplied when in unhealthy localities with respirators, and a fire is then to be kept all night in the cookhouse." Such prophylactic measures are, however, of little or no utility in the rivers of the Bights, and can only be placed on a par with the somewhat sapient plan, recommended in a work on the African colonies, of erecting a number of limekilns on the verge of the Bullom swamps, in order to decompose those miasmatic vapours that might emanate therefrom to the detriment of the opposite town of Sierra Leone.

[To be continued.]

SHORT ACCOUNT
OF A
CASE OF ENCYSTED EMPYEMA
OF TWELVE YEARS' STANDING.

By HENRY LEE, Esq.
(*For the Medical Gazette.*)

WILLIAM BARTLETT, æt. 59, died upon the 16th of March, 1845, having, for the last twelve years, been under the care of Mr. Goolden, of Maidenhead. Upon examining the body after death the following appearances presented themselves:—

The lower part of the right side of the chest was compressed, and from this point the upper part of the body was inclined towards the right side, presenting a similar appearance to that which would be produced by a lateral curvature of the spine. Between the anterior extremities of the fifth and sixth ribs, upon the same side, were two fistulous openings, with their edges inverted, and discharging a bloody fluid. The two layers of the right pleura were connected by numerous bands of adhesion. Between them, in the upper part of the chest, were contained about six ounces of transparent serum, while in the lower part a cavity presented itself, containing a dark gangrenous fluid, and circumscribed by extremely firm adhesions. This cavity was about six inches long, and four inches broad, and communicated freely with the exterior of the body by means of the sinuses above mentioned. The pleura, in this situation, was in some places three lines in thickness, and was lined upon its internal surface by a soft vascular layer, from which the bloody fluid in the cavity had apparently been secreted. The structure of the lung in contact with the diseased pleura was condensed to the depth of two or three lines only, but in other respects did not differ from the remainder of the pulmonary tissue. The lower surface of the right lung, and the upper surface of the right lobe of the liver, were firmly adherent to the diaphragm. The left lung presented soft adhesions over its whole surface. On both sides the lungs were greatly emphysematous, and their structure was everywhere loaded with serous effusion. In several situations small masses of calcareous matter presented themselves, but in no part could

any tubercular deposit be discovered. The pericardium was universally adherent. The heart was healthy, with the exception of the tricuspid valve, the aperture of which was dilated.

The history of this case was, that twelve years before his death he had been exposed to severe cold for two nights and three days, and immediately afterwards was attacked with inflammation of the right side.

In the course of a fortnight, an abscess burst, and discharged several pints of matter; and a fistulous communication remained in his side from that time to the period of his death. Considerable quantities of pus were at different times discharged, but it occasionally happened that the opening became nearly closed, and considerable oppression of the breathing would then be experienced until a free discharge of pus took place. When the external opening was larger than usual, a quantity of air would sometimes enter, and thus the patient could again expel at pleasure with considerable force. During a few weeks preceding his death, a very considerable quantity of blood was passed with the discharge from the side.

The preparation illustrating the principal points in this case is deposited in the museum of St. George's Hospital.

13, Dover Street, April 4, 1845.

ON THE PRESENCE OF PHOSPHATE
OF MAGNESIA IN BONE,

AND ON A NEW METHOD OF PROCURING
PHOSPHORIC ACID FROM BONE.

By PROFESSOR GREGORY.

To the Editor of the Medical Gazette.

Sir,

I HAVE just seen a notice, in your journal, of my *Outlines of Chemistry*; and I take the liberty of addressing you, not to complain of any part of that notice, which is only too flattering to my little work, but to mention that the supposed clerical error, in the method of preparing phosphoric acid from bones, is not an error, for that there is a very considerable quantity of magnesia present, that earth being a never-failing constituent of bones. I might, indeed, have stated this more precisely, but brevity was my object, and I con-

sidered the fact as quite well known, since every good analysis of bones mentions from 1.5 to 2 per cent. of phosphate of magnesia.

Although I take this opportunity of showing that the process described by me appears as it was intended to do, I should not have thought it necessary to address you on the subject, were it not that, in repeating the process for my lectures, I have found that part of it in which alcohol is used to separate the phosphate of magnesia not to answer. The reason of this I conceive to be, that, before the phosphate of magnesia can be separated by alcohol, the phosphoric acid must be in one of its modifications, probably in that called the tribasic or common phosphoric acid; and that my experiments were made with an acid wholly or partly in one of the other modifications. I have not yet been able to succeed with the alcohol; but in the course of my attempts I have been led to a much better method, which I shall now describe. Even were the process with alcohol more easily managed, still, in this country, alcohol can never be much used at its present price; so that any means of dispensing with its use are desirable.

Having removed the whole lime by means of sulphuric acid, and evaporated the filtered liquid (filtering again if any sulphate of lime separates during the evaporation) to the consistence of syrup, a few drops of sulphuric acid are added, to make sure that no lime remains. Of course, if turbidity ensues, the lime has not been completely separated before; and the addition of sulphuric acid, filtration after adding some water, and evaporation, must be repeated, till the syrupy liquid continues quite clear when sulphuric acid is added. This liquid now contains only the phosphoric acid, the magnesia, and the excess of sulphuric acid. It is concentrated and heated in a covered platinum crucible, until the whole of the sulphuric acid has been expelled, and the residue has acquired a low red heat. On cooling it forms a glass, perfectly colourless and transparent, which contains only phosphoric acid and the magnesia of the bones.

This glass, when boiled with water, dissolves rather slowly, but completely. When the solution is again concen-

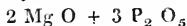
trated in a capsule of platinum, until most of the water is expelled, and the temperature rises to between 595° and 600° F., it suddenly, while hot, becomes turbid from the separation of a peculiar phosphate of magnesia. At the same moment the phosphoric acid begins to crystallise like the granular sugar deposited in honey, a form ascribed by Peligot to the bibasic or pyro-phosphoric acid. If the same temperature be kept up for fifteen minutes (and we can ensure it without a thermometer by heating to that point, and no further, at which the acid begins to vaporise with the water in the open capsule), the whole of the magnesia separates in the form of a powder, which is quite insoluble in water or acids. When cold, the mass is digested with water, which dissolves the phosphoric acid, leaving the phosphate of magnesia as a heavy, fine, snow-white powder, of a faint silky lustre. *The filtered liquid is free from every trace of magnesia*, and may be considered as pure phosphoric acid. Of course, however, if the bones contained chloride of sodium, a trace of phosphate of soda would remain. In that case the burnt and powdered bones ought to be boiled with water, to remove any soluble chloride. But I have not hitherto found it necessary to do this.

The above simple process puts it in our power to obtain pure phosphoric acid from bones cheaply and in any quantity. There is no difficulty in the execution of it; it is only necessary to keep up the heat of about 600° for twelve or fifteen minutes, but not to go beyond that temperature, because a stronger heat would again, no doubt, produce the glass formed in the first fusion, which, as we have seen, is entirely soluble in water. The acid is easily tested for magnesia by diluting and supersaturating with ammonia*, when, if magnesia be present, it very soon appears as ammoniaco-magnesian phosphate. In six or eight different operations I found no trace of a precipitate even after several days; but if I added a trace of magnesia, it was at once detected. In fact, I did not fail once (after the first operation, in which I had not heated long enough, from not knowing the nature of the salt

* Dilution is necessary, for otherwise phosphate of ammonia falls as a crystalline powder.

formed) in obtaining an acid absolutely pure as far as concerned magnesia.

The phosphate of magnesia, thus separated, is a peculiar and anomalous salt. I have made six analyses of portions made in the six different operations mentioned above, and they all agree closely with the formula



that is, an acid sesquiphosphate of magnesia, according to the older notions of phosphoric acid. This composition cannot be reconciled with any of the three generally admitted modifications of phosphoric acid; and it would seem to indicate, either that another modification exists, or that the theory of phosphoric acid and the phosphates, at present admitted, is erroneous. I am at present occupied in examining this point; but the salt itself is so insoluble in water and acids, that I have been unable to ascertain in what modification the acid exists in it: whether, namely, it contain common or tribasic, pyro-, or bibasic, meta- or monobasic phosphoric acid, or some new form of phosphoric acid. The acid filtered from it, when neutralised by ammonia, gives a white precipitate with nitrate of silver, which excludes common phosphoric acid, as might be expected at the temperature. But the acid in the magnesia salt is not necessarily the same as the free acid in which the salt is formed. As I have said above, the insolubility of the salt is a great obstacle to ascertaining this point, although by other means I hope to attain the object. That insolubility is so great, that I may almost rank the new phosphate of magnesia along with sulphate of baryta. Boiling nitric acid, hydrochloric acid, and aqua regia, are almost entirely without action upon it; and it is, I believe, the only salt of magnesia insoluble in acids.

This salt, as well as my process for phosphoric acid, I have minutely described in a paper lately read by me before the Royal Society of Edinburgh, which will be hereafter published. In the mean time, your chemical readers may like to know so simple a means of purifying the acid of bones.

I remain, sir,

Your obedient servant,

WILLIAM GREGORY.

University of Edinburgh,
March 22, 1845.

[REMARKS.—We have great pleasure in inserting Professor Gregory's letter, and if we take the liberty of making any comments we trust he will consider that they are made rather in the spirit of friendly inquiry, than of editorial criticism. It has always appeared to us that there was considerable difficulty in determining the existence of phosphate of magnesia in bone, owing to the presence of phosphoric acid and lime, and the absolute necessity for entirely separating the lime before the existence of magnesia could be satisfactorily determined. The only analyses of human bone with which we are acquainted are those of *Berzelius* and *Thilenius*—that of *Berzelius* is copied by most chemical authorities. Both agree with Dr. Gregory in assigning phosphate of magnesia as a constituent; but *Berzelius* states (vii. 474) that he thinks it probable the magnesia exists in the bone as *carbonate*, and that its separation as phosphate is owing to the analytical method adopted,—the magnesia always precipitating itself with phosphoric acid and ammonia as a double salt, even when there is more lime in the solution than the phosphoric acid can saturate.

Dr. Gregory's plan of detecting magnesia differs, we believe, from any yet suggested. *Berzelius* recommends the entire precipitation of a slightly acid solution of bone (the phosphoric acid) by a solution of acetate of lead. The filtered liquid, deprived of surplus lead by sulphuretted hydrogen and neutralized by ammonia, now allows of the entire separation of lime by oxalate of ammonia, and this liquid, when filtered and evaporated to dryness, leaves, he states, pure magnesia.

The method often pursued by chemists is to dissolve the mixed phosphates of lime and magnesia in a mineral acid; this solution is then nearly neutralized by ammonia, and then precipitated by oxalate of ammonia. The production of oxalate of lime, however, under these circumstances, necessitates the formation of phosphate of ammonia; and the compound phosphate of ammonia and magnesia will therefore be precipitated. This plan has invariably failed to detect magnesia in bone; for in general the filtered liquid only has been examined.

Dr. Gregory recommends sulphuric

CASE OF

POISONING BY PRUSSIC ACID.

COMMUNICATED BY MR. HICKS
AND MR. WATERWORTH.*(For the London Medical Gazette.)*

acid for separating the whole of the lime from magnesia in bone; but, as he used no alcohol, it is a question whether the whole of the lime can be separated by means of this acid. Admitting that sulphate of lime is present in the evaporated bone-liquid, as prepared by our intelligent correspondent, we do not see how the entire absence of lime can be inferred by the liquid remaining clear on the addition of sulphuric acid; since, so far as our observation goes, this acid does not affect a solution of sulphate of lime either by itself or when mixed with phosphoric acid. We would, therefore, beg to inquire, whether the liquid, nearly neutralized by ammonia, does not give a precipitate with oxalate of ammonia indicative of lime; for this test will undoubtedly detect the presence of lime when sulphuric acid entirely fails; as, for example, in common lime-water in a solution of sulphate of lime, or in the bone liquid, as it is commonly prepared for the extraction of phosphorus.

This question does not at all affect the value of Dr. Gregory's ingenious discovery, *i. e.* of procuring the whole of the phosphoric acid in bone, by simply evaporating the liquid at about 600°, and thus procuring a mass which yields soluble phosphoric acid and an "insoluble heavy white powder," for the reduction of which we would suggest to our correspondent the use of the cyanide of potassium in the dry way.

Dr. Gregory's communication will induce us to repeat some experiments on bone, in order to determine whether phosphate of magnesia be really present or not. All that we can say is, that in an experiment conducted, as we thought, with precaution, we could not succeed in finding a trace of magnesia either as phosphate or carbonate. A newly discovered process for rendering phosphoric acid, as it is contained in bone, perfectly volatile at a comparatively low temperature, promises to put it in our power to obtain directly from bone, lime, and, if it exist, magnesia in a caustic state. There will then be no difficulty in determining either the presence or the exact proportion of the alkaline (earthy) bases in bone.—*Ed. Gaz.*]

On Friday, the 21st of March, Mr. Hicks, of High Street, Newington, was sent for in great haste to see a person who was stated to have been suddenly taken seriously ill. On his arrival, he found the patient to be a female about 22 years of age, and of small stature; she was lying on her back perfectly insensible, the teeth clenched, foaming at the mouth, and the face so greatly congested as to be almost purple; the breathing was slow, laborious, and at long intervals, the pulse gone, and the action of the heart but feebly to be felt; the eyelids were partly closed, and the eyes appeared as if pushed forward between them, while the pupils were dilated, and quite insensible to the stimulus of light; the whole body was under such strong spasmodic action, that the head seemed buried between the shoulders, and the arms nearly turned round by the action of the pronators. There was neither emprostotonos nor opisthotonos.

Such were the symptoms as nearly as he can recollect; and from the bloated state of the countenance, together with the foaming state of the mouth, his first impression was that the girl was labouring under some form of epilepsy*; but upon finding the patient pulseless, and the heart scarcely to be felt, he naturally looked for some other cause; when he found, upon inquiry, that the symptoms had come on directly after taking a dose of medicine, which he ascertained by tasting and smelling to contain prussic acid. This led him to the conclusion that the symptoms were produced by an overdose of that medicine; and in conjunction with Mr. Watson, a medical gentleman whom he found at the house upon his arrival, he resorted to the means recommended in such cases—such as cold affusion to the head, applying ammonia to the nostrils, and endeavouring to give brandy and ammonia internally. As, however, the muscles of deglutition were so fully

* No odour of prussic acid was perceived about the mouth, or in the room.

under the influence of the poison, it is doubtful whether more than a small quantity passed into the stomach, notwithstanding every means was used, by irritating the fauces, to stimulate those muscles to action. Their efforts were, however, perfectly useless, as the breathing became gradually slower; and in less than ten minutes after their arrival the patient died,—death appearing to be caused by the perfect inability of the sufferer to inspire, from the muscles of the chest, as of every other part of the body, being under strong tetanic spasms; the natural consequences being extreme congestion of the brain and lungs.

On making inquiries of the father, who was present at the time the medicine was taken, it appears that no sooner was the liquid swallowed, than the girl, who had been previously sitting, started up, throwing her hands over her head, uttering at the same time a loud gasping sound, *but no scream or shriek*; she stood still for a second or two, then running forward about two yards, fell with her head first to the ground; after which she never moved, but continued to make a sort of moaning noise for five minutes. The respiration was accompanied by a sound very much resembling that observed in laryngismus stridulus. The ribs appeared to become fixed by a sudden tetanic spasm of the muscles. The time which elapsed between the taking of the liquid and death was *twenty minutes*. The deceased died ten minutes after the arrival of Mr. Hicks.

Post-mortem appearances.—At *ninety* hours after death (or nearly four days), the body was examined, when the following were the appearances presented. Externally there was great lividity, the teeth firmly clenched, and there was foam about the mouth.

Head.—The dura mater and sinuses were much congested, and the whole substance of the brain was dotted with blood, which was fluid, and exceedingly black. Ventricles empty; no odour of prussic acid in this cavity.

Thorax.—The lungs were much congested, otherwise healthy; heart small, and of feeble power; the right ventricle slightly dilated, but the valves healthy; the whole organ was filled with blood, which was perfectly fluid, and of a very dark colour. The odour of prussic

acid on opening this cavity was very evident, not so much from the smell as from the sense of constriction produced in the fauces.

Abdomen.—The stomach contained about two ounces of undigested food, smelling strongly of prussic acid, the organ itself appearing healthy, with the exception of a small patch near the cardiac orifice, which was red and vascular. This, Mr. Hicks, however, is inclined to think was not the effect of the poison, but that it had existed for some time, as it was for some form of dyspepsia that the patient was taking medicine.

The liver was healthy, as well as all the organs in the abdomen; there was no tinge of blue about the gall-bladder, or in its contents.

The contents of the stomach being taken to Dr. Letheby, of the London Hospital, were submitted to examination, in the first place, by putting them into a retort and distilling by means of a water-bath, by which process two drachms of fluid passed over, smelling of prussic acid, a portion of which being tested by the iron test gave evidence of the poison by the formation of Prussian blue, and afterwards, by testing with the nitrate of silver, a white precipitate was produced, insoluble in cold, but soluble in boiling nitric acid; and on heating the cyanide of silver in a small reduction-tube, cyanogen was evolved, which burnt with a purple flame; these tests satisfactorily proved the presence of prussic acid.

The next point to be considered was the determination of the quantity of prussic acid taken by the deceased. From information supplied by Mr. Hicks, it appears that one half of the mixture, which was intended for a lotion, yielded on distillation and the precipitation of the distilled liquid by nitrate of silver, nine grains of cyanide of silver. In the whole mixture, therefore, amounting to four ounces, there would be a quantity of prussic acid equivalent to eighteen grains of the cyanide of silver. This would amount according to the usual calculation to three grains and six-tenths of anhydrous prussic acid. The deceased had swallowed by mistake one-fourth part of this lotion: she had, therefore, taken *nine-tenths of a grain* of anhydrous prussic acid. Taking Scheele's

acid at five per cent., this would be equivalent to eighteen grains, or rather less than twenty drops of Scheele*: and, on comparing it with the Pharmacopœial acid, at two per cent. this quantity of anhydrous acid would be equivalent to forty-five grains, or forty-nine drops.

REMARKS.—This is probably the most interesting case of poisoning by prussic acid which has been yet recorded. The history is in every respect complete: the poison was accidentally swallowed in the presence of a person, who was able to observe and give a good account of the symptoms to Mr. Hicks. This gentleman arrived ten minutes before the death of the deceased, and noticed for himself some of the most striking symptoms;—a complete inspection of the body was made,—the post-mortem appearances were accurately noted, and lastly, the exact quantity of poison swallowed by the deceased, was most satisfactorily determined by a chemical examination of the lotion.

In respect to the symptoms, it would appear, from the father's statement, that he first heard a gasping noise, but there was no shriek or scream. This case, then, appears to put an end to the theory that poisoning by prussic acid is always accompanied by a "death-scream" or "shriek,"—a subject of discussion at the trials of Belamy and Tawell*. There was the slow laborious breathing at long intervals, foaming at the mouth, protrusion of the eyes, dilated pupils, pulselessness, and insensibility. Mr. Hicks states that there was no stertor; that during the convulsive fits the head and neck seemed to be spasmodically drawn down into the chest. The convulsions do not appear to have been so great as to affect the trunk. Emprosthotonos and opisthotonos were absent; a fact which may account for the want of

evidence of a distorted or convulsed state of the body, with disturbance of the clothes, in persons who have been found dead in bed, and who had taken prussic acid. The most remarkable part of the case is, that the girl obviously retained volition and the power of locomotion for a short time after swallowing the dose. She was able from a sitting posture to assume the erect attitude, throw her arms above her head, and then run a short distance before she fell. When seen by Mr. Hicks she was perfectly insensible, and unconscious of everything that was passing around her. She made the same moaning noise before death, that was observed in the case of Sarah Hart.

The most striking of the post-mortem appearances were,—the fluidity* and dark colour of the blood. It does not appear that the blood had any odour of prussic acid, although this odour, or rather a *sensation* which some experience in smelling the acid instead of odour, *i. e.* "*constriction of the fauces*," was perceived by some of those present on opening the cavities of the thorax and abdomen. The contents of the stomach smelt strongly of prussic acid, *i. e.* gave a constricting sensation in the fauces, and this was observed *ninety hours* after death. In a case examined by Mr. E. Crisp, of Walworth, where it is probable a considerably larger dose of the poison was swallowed, there was no odour of prussic acid in any part of the body, although the examination was made seventy hours after death†. Facts of this description show that the detection of an odour is a very uncertain attendant on poisoning by prussic acid. The term "*odour*" appears, indeed, to be improper, when applied to a sensation experienced in the throat; many can detect no odour at all in prussic acid, although they have an undefinable sensation of its presence. One point is quite certain, that those who look for an odour of bitter almonds in these cases will commonly be deceived, and pronounce the poison to be absent. It is very easy for a person who has tried some experiments on the subject to distinguish the smell of prussic acid from that of bitter almonds; but it is a

* Two drachms of what was said to be Scheele's acid were put into the bottle, but the analysis proved that the acid must have been under the strength of Scheele.

† Another case of poisoning by prussic acid, without any "shriek or scream," was reported in the MEDICAL GAZETTE of last week. See page 859. Mr. Hicks took especial care to ask the father as to the kind of noise made by the patient on taking the poison, and from the description he gave, it does not warrant the assumption that any peculiar shriek is made in death from prussic acid. It was a mere gasping for breath. See also a third case, Edinburgh Medical and Surgical Journal, Vol. 48, p. 44.

* In Dr. Meyer's experiments on animals, the blood was found coagulated. Schmidt's Jahrbücher, 1844.

† Lancet, Sept. 14, 1844.

question whether many do not actually seek for the smell of the latter, as evidence of the presence of the poison.

It is not a little singular that in this case, the odour of prussic acid was more distinctly recognised in the thorax than in any other cavity! Some who were present perceived it more strongly in the chest than in the abdomen, even after the stomach itself had been laid open.

The only other appearances remarked, were congestion of the lungs and brain. The heart was filled with blood; the aorta empty. There was no blue tint in the contents of the gall-bladder; the kidneys had a pinkish colour, and were much congested.

The most important fact which this case discloses remains to be mentioned; it settles beyond all dispute that the *life of a healthy adult may be destroyed by a dose of anhydrous acid equal to nine-tenths of a grain*. Dr. Geoghegan* has described a case in which a gentleman narrowly escaped with his life after having swallowed a quantity of the acid equivalent to *thirty-six* drops of the London Pharmacopœial acid. In Mr. Hicks's case a quantity equivalent to *forty-nine* drops of the same acid was taken, and the person died in twenty minutes. In a case reported by Dr. Banks, a female recovered after taking thirty drops of an acid, the strength of which is not stated!† It is, however, quite possible that a person might die from a smaller dose than that taken by the deceased in this instance, because circumstances may cause the effects of the same dose to vary in its operation on different persons. Another point worthy of remark is, that the quantity which certainly killed this woman was actually less than that which was found to be present in the stomach of the woman Hart: and yet it was absurdly attempted, in the defence of Tawell, to show that there was not enough of the poison found to destroy life! We have, then, in cases of Dr. Geoghegan, and Mr. Hicks, the clearest proof—1, that a person has recovered from a quantity equivalent to thirty-six drops of P. L. acid (fourteen of Scheele); and 2d, that a person has died from forty-nine drops of the P. L. acid (twenty drops of Scheele‡). It appears to be impos-

sible to have the fatal dose of a poison fixed with greater precision*.

* All English medical jurists have hitherto laid it down that *three-quarters* of a grain of anhydrous prussic acid might be regarded as a fatal dose. When we consider the alarming symptoms produced by *two-thirds* of a grain in Dr. Geoghegan's case (the patient having had a most narrow escape of his life), and that death has here been caused by *nine-tenths* of a grain, it will show that the opinion thus expressed by Christison and others, is perfectly borne out by facts. It has been objected that the dose given in the cases upon which this opinion was based (*i. e.* the cases of the seven Parisian epileptics), had been misstated by all English writers, and it does appear that an error has crept into every English work on toxicology, in relation to the dose which proved fatal in these instances. The error, however, is but little more than the *third* of a grain, as the following calculation will show:—

Each patient took a dose of sirop hydrocyanique du Codex, containing ten per cent of medicinal prussic acid. According to Orfila, the quantity of medicinal acid in each dose was twenty grains (French), or 16·94 grains English (Ann. d'Hyg. 1829, 507). In another report Orfila states that each patient took of medicinal acid one gramme fifteen centigrammes, or 17·75 grains English (Toxicologie, ii. 285). It will be observed that here is a difference of 0·81 grain of medicinal acid in the dose taken. Gay-Lussac, Magendie, Barruel, and Orfila, were employed by government to determine the strength of the sirop hydrocyanique du Codex; and that this was the same as that prescribed for the patients appears evident from the identity in the specific gravity and proportion of acid present (Ann. d'Hygiène, 1829, pp. 495–504). They found, by careful experiment, that ten grains (French), or 7·7 grains English, of the acid used in the syrup, gave, with nitrate of silver, 15 centigrammes, or 2·31 grains, of washed and dried cyanide of silver. Thus, then, 100 grains of the medicinal acid, used in the syrup, would yield 30 grains of cyanide of silver, and this would indicate a strength of *six* per cent. of anhydrous prussic acid. Admitting Orfila to be correct in stating that each patient took in the dose of syrup 17·75 grains (English), of medicinal acid, this would be equivalent to 1·06 grains of anhydrous prussic acid,—a dose only a little greater than that taken in Mr. Hicks's case.

It has been stated that each patient took 24 grains of anhydrous acid,—Devergie says 5·64 grains (French) = 4 grains English of concentrated acid: but not to mention the proof to the contrary in the above calculation, the symptoms and duration of these cases much more clearly resemble the effects of a dose of about a grain of anhydrous prussic acid, than those of a dose of two or four grains; and the mistake in the quantity has arisen probably from a calculation of what the strength of the acid *ought* to have been, rather than what it was found to be. Two grains and a quarter of anhydrous acid are equal to about 50 grains of Scheele, and 120 grains of the P. L. acid. Some of the epileptic patients survived three-quarters of an hour; but had the dose been so large as above supposed, it is highly probable that they would have died in a much shorter period of time. This result shows that we have in Mr. Hicks's case the smallest dose of prussic acid which has yet destroyed life: but this does not at all affect the opinion that three-quarters of a grain of anhydrous acid might act as a fatal dose,—an opinion to which we believe all toxicologists would assent.

* Dublin Medical Journal, vol. viii. p. 308.

† Edin. Med. and Surg. Journ. Vol. 48, p. 44.

‡ It is here assumed that Scheele's acid contains 5 per cent. of anhydrous acid, but it is seldom found so strong as this.

ANALYSES AND NOTICES OF BOOKS.

“L'auteur se tue à allonger ce que le lecteur se tue à abrégé.”—D'ALEMBERT.

The Diagnosis, Prevention, and Treatment, of Diseases of the Heart, and of Aneurism. With Observations on Rheumatism. By J. J. FURNIVALL, M.D. London, 1845. 8vo. pp. 216.

THERE are several difficult and obscure subjects in pathology upon which it appears to be almost impossible to write either too much or too often; providing always that the authors are neither quacks nor tyros, but men of experience and research, whose efforts are continually bent to the honest purpose of removing the doubts which beset the subjects of their inquiries. Among the chief of these topics are phthisis, malignant disease, and cardiac affections.

The greater part of the work before us appears to be made up of such observations of other writers as the author considers to have stood the test of his own experience: it would be difficult to point out more than one or two doctrines in the book which have altogether originated with himself, and yet, after carefully noting his views, especially those on the general pathology of the diseases, and the principles of their treatment, it appears to us that very few writers have appreciated so justly as he has done the real characters and tendencies of cardiac affections, and the rational plan upon which they should be treated. We allow this freely, with regard to his general doctrines, although we shall have to differ entirely from him in several of the details.

The work is divided into ten chapters; the principal of which treat of pericarditis, endocarditis, hypertrophy, dilatation, diseases of the valves, observations on the treatment of aneurism, palpitation, and functional disorders, and observations on rheumatism and on the prevention of heart disease. Under these heads are included the diagnosis, prognosis, and treatment of each class of disease. It is fairly stated, in the preface, that “the diagnosis is a practical digest and compilation from the latest authors who have written on the subject.” This plan certainly has its advantages; but it appears to us that, in more than one instance, a too close adherence to the somewhat un-

proved opinions of others has taken from his remarks that practical character which is always so discernible in a work of actual observation. We shall now proceed to make extracts from those parts of the work which appear to contain the most prominent and useful of the author's opinions. The following remarks occur in the “General Observations on Diagnosis.”

“It would be well could we always and with certainty distinguish between functional disorder, and organic disease of the heart; but this is not always to be done. This circumstance will, at times, prove a comfort to both practitioner and patient; as it should prevent the former from either giving or entertaining too gloomy an opinion while he awaits the results of treatment, and the latter can entertain more hope of recovery than if his medical adviser could decide that there is organic and incurable disease. We shall be aided in this diagnosis by observing whether the symptoms have arisen suddenly or come on gradually; whether they are intermittent or constantly present. Wherefore we should at the very outset inquire whether the dyspnoea (usually the first symptom) is a constant attendant upon every exertion of muscular power.” p. 13. In another place it is observed, “Functional palpitation occurs only occasionally; it is not excited, but often relieved by corporeal exercise; and this is a very distinguishing mark, for organic palpitation is both excited and augmented by exertion, even very slight exertion; it may come on, while quiet though wakeful, in the night; it is accompanied by nervous symptoms; during the intervals the pulse and action of the heart are natural; and this is another distinguishing mark.” p. 189.

The following observation is familiar to most practical auscultators, but is of great value. “Let not the student be discouraged if he shall on some days distinctly hear certain sounds which on other days are obscure, or not to be heard at all; for, as I have already said, the sounds will vary from the effects of treatment, and other causes. Treatment will often exert a marked influence over the sounds, so as to cause a new comer, examining for the first time, to suspect or even to deny their existence altogether, past or present.” p. 15. In discussing the pro-

bable causes of the greater frequency of the occurrence of the disease in the left cavities of the heart than in the right, Dr. F. argues that as the "fully elaborated arterial blood is the natural stimulus to the heart's action," this blood, "highly elaborated, and rich as it is in stimulant material, may be rendered by disease more stimulating to the parietes of the cavities and canals through which it circulates, than the venous would be to the right ventricle." p. 17. It would require further chemical data than we at present possess to establish the correctness of this theory. It is not easy to perceive why, even under a diseased condition of the fluids, the more elaborated arterial blood should have a greater irritating influence on the tissues which it permeates than the venous fluid has, which comes to the heart loaded with many impurities. We have always attributed the greater tendency to disease of the left cavities, in some measure, to the comparatively unyielding nature of their structures, the closeness of the valves, and the great and almost rigid power of the ventricle, all of which circumstances must have an influence in rendering the parts more liable to mechanical injury, upon occasions of obstruction and over-excitement. In nine-tenths of the cases of mechanical lesion of the heart, the mischief is found to have occurred on the left side: the right cavities are more accustomed to obstructions, are more pliable and elastic, and therefore do not so readily suffer from over-distension. It may be, too, that the cavities on this side of the heart are naturally more adapted to the reception of irritating fluids than those on the left: as, in health, the former receive the highly carbonized fluid from the veins, and the latter are accustomed to transmit only a perfectly depurated stream, so, in disease, a strongly azotized or otherwise morbid fluid may be conveyed with impunity by the right cavities, while it produces the most irritating effects upon the left. All are aware that pungent substances, which can be borne without injury on the mucous membrane of the lip, produce the most violent inflammation if applied to the conjunctiva of the eye; and yet it would be difficult to assign for this any other reason than that of necessity. One of the most prominent of the author's opinions is the depen-

dence of rheumatism, and the consequent pericardial and endocardial affections, upon the existence of a morbid state of the blood itself. In its general bearings this view is, we believe, shared with him by many pathologists of the present day. Dr. Furnivall rests his theory upon the following grounds. "An excess of fibrine has been detected in the blood of rheumatic persons; which excess must render it highly and morbidly stimulant. Probably there is also some other arrangement of its primary components, which, in the present state of our knowledge, may be best described by saying that it is relieved by an elimination of acid through the secretions, and best obviated in treatment by the use of alkalis. Possibly lithic acid may exist in excess in the form of lithate of soda." He adds, that Dr. Schönlein holds this opinion also. The chapter on pericarditis contains much that is deserving of attention. The following view is, we believe, rather opposed to the opinion generally entertained: "Pericarditis seldom precedes endocarditis, for the signs of the latter are generally first to be met with." p. 34.

An observation on the diagnosis of adherent pericardium, by an experienced auscultator, is here introduced. It first appeared in this journal, but is worth re quoting. Mr. Aspland says, "In a healthy individual sitting erect the apex of the heart strikes at two inches below the left nipple, and one inch nearer the sternum. If lying on the left side it strikes in a line vertical with the nipple; if lying on the right, it strikes in a line with the edge of the sternum. In adherent pericardium this mobility is lost. The apex of the heart does not change its place of beating by any change in the patient's position." Dr. F. has never failed to remark labouring action of the heart in pericardial adhesion. The opinion of M. Forget, that occasionally "scarcely any appreciable embarrassment is caused thereby to the movements of the heart," will also find its advocates: it is true that adhesion seldom fails to be attended eventually with fatal disorder of the cardiac functions, but many instances occur in which, while the organ remains free from hypertrophy, its valves being healthy, there is certainly no observable disordered action. The author

considers that a different plan of treatment is required in uncomplicated cases of pericarditis from that which is proper in acute pericardial inflammation. In the former this must be as vigorous as the strength of the patient will allow. "Bold venesections on the first day, then cupping and leeching as freely as possible; this is, supposing there is no endocarditis." p. 45. In the latter disease, he says, "the treatment usually recommended is that of pericarditis; and if by that be meant pericarditis complicated with endocarditis our practice will be correct, and in the great majority of cases such a complication will occur; but the treatment of uncombined pericarditis differs from that suitable to endocarditis, as it will admit of more energetic treatment than will endocarditis. In the latter syncope might be fatal, and we therefore must use the lancet very carefully; while in pericarditis we may bleed with much boldness. Agam, nausea unto faintness will prove beneficial in the latter; but in the former, where the fibrine renders the current of blood through the heart very sluggish, faintness from languor may favour depositions of fibrinous concretions." p. 62. In this latter disease, therefore, we are recommended to employ "one or two bloodlettings, avoiding the slightest approach to syncope; then local detractions of blood will be preferable, and cupping and leeches might be prescribed, according as circumstances seem to require." The remainder of the treatment will consist principally in the use of mercury carried only to the extent of producing tenderness of the gums, and alkalis, which the author regards "as almost specifics in this disease, as they seem to reduce the abnormal thickness of the blood very speedily and very effectually." p. 64-5. The distinctions which Dr. Furnivall here lays down may perhaps be followed out, and with advantage, by experienced physicians, but we doubt whether they have not a tendency to perplex many of the class of men to whom this work is more especially addressed—students and junior practitioners. It is represented that there are here two diseases—pericarditis and endocarditis, which require to be very differently treated:—we are also told, and few are unaware of the fact, that these diseases frequently coexist, and

that the diagnostic distinctions between them are not always very clearly defined; for although Dr. Furnivall lays it down as a rule that the existence of a bellows-murmur in cases of pericarditis may be taken as an assurance that endocarditis is also present, (p. 35), we have seen more than one experienced auscultator at fault in deciding whether a sound of this kind arose from the interior or exterior of the heart; and, we submit, it would be difficult to disprove the fact that the most frequent sign of mere pericardial inflammation is a murmur of this character. Indeed, in the very next page (p. 36) Dr. F. himself, in describing the characteristics of pericardial bruits, says, "The character of the sound varies; it may resemble the rumpling of silk or parchment, the creaking of new leather, the sound of a rasp, or it may be merely a bellows murmur." Under these circumstances we do not perceive that Dr. Furnivall makes out very clearly the distinctive marks by which it can be perceived that one or other class of treatment should be adopted. For our own part we have always been opposed to the use of extensive depletory measures in severe cases of rheumatic pericardial and endocardial inflammation. In the lighter cases of the former disease, that is to say, where the patients are young, stout, and vigorous, active antiphlogistic means are often successful; but, where the pericarditis occurs in a patient who is at all debilitated, free general bloodletting appears to us to be a most dangerous measure, and we have certainly seen the symptoms of pericarditis become aggravated after depletion in weakly patients, so rapidly, and to so formidable a degree, as to render it evident that the treatment had aggravated the disease and placed life in imminent jeopardy. It is probable that, in most cases of pericarditis, there also exists more or less of pericardial complication, but the cases where the symptoms of inflammation of the lining of the heart become very evident are generally those in which the patients have been previously unhealthy; and here the inflammatory symptoms, assuming a low type, altogether contraindicate the French system of treating endocarditis by extensive bleedings. We should be glad, did our space admit, to quote from the author's views on the treatment of hypertrophy, which

are very just: we can only give the following isolated passages. "Our indications of treatment are two-fold—one, to reduce the irritability and abnormally great action of the muscular fibre itself; the other, to diminish the quantity of fluid in the ventricle until there is as little fluid remaining in it as may consist with a due performance of its vital functions." "A reduction of the mass of circulating fluid is important; for as the quantity lessens so will the ventricular parietes adapt themselves to their contents." "One great point (in the treatment) is abstaining from much drink, and as dry a diet must be followed as the patient can bear." p. 75-7. The author's views are principally extensions of the opinions of Hope and subsequent writers, but they are well given, and appear to be delivered by one who has tested them by his own experience, and proved their value. We would apply the same encomium to his principles of treating dilatation, (p. 102.)

We are happy to find that Dr. Furnivall agrees with those who are generally opposed to the internal administration of digitalis in organic diseases of the heart, which he does, not only on account of the aggravation of symptoms which this drug is liable to produce, but from the fact of its favouring the tendency to further distension and dilatation of the cavities of a diseased heart. He objects to it, also, because it is apt to produce nausea and gastric irritation, and with this gastric irritation he has found that it ceases to lower the pulse—it raises it—neither will it then act as a diuretic. The author observes, in another place, "Its influence is to enfeeble the action of the heart, and retard the circulation of the blood; consequently, it will promote the stagnation of the blood, the very thing it is our object in this disease to avoid" (he is here speaking of endocarditis, but the same remark applies equally to all other diseases of the heart): "it has been banished by all good practitioners from all diseases of the heart attended with debility of the organ." p. 64. He has, however, used digitalis endermically, with advantage (applying the powder to an abraded surface on the chest), in paroxysmal attacks of palpitation and dyspnoea attendant upon organic disease.

The only form of heart disease in

which he would give this medicine internally is that of hypertrophy of the right ventricle in complication with narrowing of the mitral orifice. Upon this point we shall presently offer one or two dissentient remarks. A good deal of interesting matter is contained in the chapter on "Diseases of the Valves," but we doubt if this portion of the work has received so much care from the author as its importance required. It is evident that neither Dr. F., nor many of our English auscultators, will be willing to admit, with Professor Forget, that in organic disease, "whether it be the aortic or mitral valve that is affected, it is never easy to say." We think that many would be found to differ from Dr. Furnivall in the opinion stated at p. 132, that in great contraction of the aortic valves the pulse is generally "intermittent and irregular." In the following page it is stated, that "obstructive disease is accompanied by a hard, jarring pulse." No allusion is made to the peculiar musical, whistling, or cooing sound which is so characteristic an attendant upon the diastolic movements in cases of regurgitant disease accompanied with retroversion of the aortic valves.

The remarks upon the treatment of dilatation accompanying disease of the valves are worthy of careful perusal; we must, however, venture to differ from the author in his opinion, expressed at p. 147, that an entirely opposite plan of treatment should be adopted in cases of obstruction of the mitral valve to that which is indicated in aortic valve disease. He appears to have arrived at this conclusion from adopting the now generally discarded opinion of M. Bricheteau, that, in the former case, the forcible action of the hypertrophic right ventricle is the cause of the pulmonary hæmorrhages and obstructions which are such frequent and dangerous attendants upon mitral narrowing; and that it is therefore requisite to reduce the muscular and propulsive power of the right ventricle. In this disease alone, then, he recommends the use of digitalis, combined with tonics, and says that here detractions of blood, and the use of hydragogue purgatives, as elaterium, may also be employed, p. 149. In speaking of these cases, he remarks: "Digitalis is peculiarly serviceable,

for it protects the lungs from the too powerful action of the right ventricle, it lessens dyspnoea, it prevents hæmoptysis, and allows the left ventricle to be less overpowered by the onward pressing current." p. 171. Now, we believe that, in cases of simple mitral obstruction, the left ventricle is never embarrassed with too great a pressure of blood, until a very late period of the disease, when venous obstruction begins to produce delay in the systemic arteries; but, on the contrary, this cavity is not unfrequently found small and contracted, evidently from the scantiness of the current which it has had to transmit. In narrowing of the mitral orifice the right ventricle is placed nearly in the same pathological condition as the left ventricle is when its outlet becomes contracted; and the ultimate consequences are, upon the whole, nearly the same in both instances—that is to say, the obstruction, in either case, produces engorgement of the ventricle behind it: the delay to the transmission of blood, thus occasioned, is for a time partially compensated by hypertrophy and increased propulsive power in the muscular walls of that cavity; but, from the first onset of the disease, permanent dilatation of the ventricle gradually advances in each instance; and whenever this arrives at the point of counterbalancing the increased power which hypertrophy has given to the muscle, the ventricle becomes incapable of contracting, and death results. Now, we are aware that dilatation does not make such rapid progress in the right ventricle, under the circumstances mentioned, as it does in the left, when that cavity is similarly embarrassed owing to the interposition of the pulmonary vessels of the left auricle; it is also to be admitted that while there is more hypertrophy than dilatation, and the heart still acts vigorously, digitalis, and other depressing agents, do not usually produce any very apparent serious results; and when this medicine acts as a diuretic, a quantity of fluid is thus removed from the system, and the symptoms are, for a time, relieved. But it is also certain that the ultimate tendency of mitral disease is to weaken and incapacitate the right ventricle, and that the hypertrophy of this cavity is a provision of nature by which alone it is enabled to carry on the circulation. Is it, then, here a judicious

course to make use of a remedy with regard to the effects of which we shall again quote the author's own words: "its influence is to enfeeble the action of the heart, and retard the circulation of the blood"? We have long thought that in all organic diseases of the heart the use of digitalis should be discontinued on principle, as it always tends, more or less, to produce that weakened condition of the organ which, in the ordinary course of the disease, ultimately proves fatal, and as the temporary benefit which ensues from its diuretic effect might always be produced with more safety by remedies which do not in any way depress the action of the heart. In a practical and elementary work, professing to embrace the whole treatment of cardiac disorders, we are surprised to see but very slight allusion made to the influence of pulmonary affections in aggravating the symptoms of valvular and other organic diseases, and that very little stress is laid upon the necessity of watching, with the utmost solicitude, the condition of the pulmonary functions in these states. Very few patients, comparatively, die from the ultimate effect of cardiac obstruction—complete inability of the heart to contract; by far the greater number perish from the superaddition of bronchitis, or some other inflammatory condition of the lungs. Very slight cardiac lesions will determine a fatal result in cases of pulmonary disease; while, on the other hand, it is often surprising for how many years persons affected with almost extreme valvular disease continue to enjoy tolerable health when the lungs remain in a healthy condition. It is very observable that in mild winters comparatively few cases of heart-disease present themselves to our notice; while, at the commencement of a severe season, patients thus affected begin to crowd the wards of our large hospitals, like withered leaves which the first sharp gusts of winter have driven from their branches.

Although we differ from Dr. Furnivall in certain of his conclusions, we do not hesitate to say that his work contains much that is valuable. Most persons will admit that the faculty which enables an author to appreciate and extend the useful suggestions of others is scarcely less meritorious than that which leads to the observation of

novel facts. We have little doubt that had the author observed the caution of retaining his manuscript a few months longer, further consideration would have led to the correction of the occasional inconsistencies which detract from, but do not destroy, the value of the work. We recommend its perusal, and repeat, that, upon the whole, the author will be found to have displayed in it a just appreciation of the pathology and general treatment of cardiac diseases.

MEDICAL GAZETTE.

Friday, April 11, 1845.

“Licet omnibus, licet etiam mihi, dignitate
Artis Medicæ tueri; potestas modo veniendi in
publicum sit, dicendi periculum non recuso.”

CICERO.

REGISTRATION AS IT WILL AFFECT FUTURE PRACTITIONERS.

IN our last number we discussed the various questions which have arisen respecting the registration of medical men now legally engaged in practice. We propose on the present occasion to say a few words respecting the registration of future practitioners. So far as concerns both classes, we must regard this registration as compulsory; for whatever may be the professional qualifications of a man who omits to have his name inserted on the register, he will no longer be regarded in law as a member of the medical profession; and he will be deprived of all the legal rights (few as they are) which the bill secures to registered practitioners. It is important that this should be well understood; for something has been said about the registration being “optional,” or only “inferentially compulsory,” &c. It was even at one time proposed, and we do not know that the scheme is yet entirely abandoned, that an attempt should be made to defeat the whole measure by a general refusal to register. An Act of Parliament, however, when once passed, cannot

be thus set at defiance, and the unregistered would be taught, when too late, that by taking such a course they had acted most unwisely. The penalty would be a recommencement of their studies, followed probably by a more severe examination than that which they had already undergone.

The clause which affects the registration of future practitioners is the 13th. It runs as follows:—

“And be it enacted, That a Register shall be kept and published from time to time, under the direction of the said Council, of all persons who shall have been examined, and shall have received, and shall exhibit before the said Council, Letters Testimonial as hereinafter mentioned of their qualification to practise as a Physician, or as a Surgeon, or as a Licentiate in Medicine and Surgery; for which registry the Council shall be entitled to have from the person requiring to be registered a fee of *Five Pounds* in the case of a Physician or Surgeon, and the fee of *Two Pounds* in the case of a Licentiate, which fees shall be applied toward defraying the expenses of this Act; and every person whose name shall be so registered, who shall be desirous that his name shall be continued in the published Register, shall in the month of *January* in every year send to the said Council his name and place of abode, with the date of his Testimonials, and the Council shall verify the returns so made to them by comparison with the Register kept by them, and shall forthwith, without any further fee, cause the names of all persons duly registered and so returned to them to be published in alphabetical order in their several classes, with their several places of abode, and dates of their Testimonials.”

There can be no doubt about the meaning of this clause. The registration fee is here five pounds for physicians and surgeons, and two pounds for licentiates. For our parts we do not see why this fee should not have been higher for the *future*, and lower for the *present* race of practitioners. The present holders of two diplomas, hav-

ing already paid a high sum for their qualifications to practise, should have been allowed to register at a mere nominal fee, especially as, under the bill, they are to be placed on the same footing as those who will hold only one. The regulation of fees for future diplomas, being placed in the hands of the Council of Health, might have been made proportionally lower.

Under this clause, it will be observed—there must be an *annual* registration in the month of January, or an individual will forfeit his rights as a registered practitioner. This annual registration will entail no additional expense, but the practitioner must take care that through his own neglect, his name is not struck off the register. This regulation applies both to present and future practitioners, although it occurs only in the clause referring to the registration of the latter. What is required of a practitioner, in order that he should thus retain his legal rights, is so fully explained in the clause itself, which we have here reprinted, as to render any further comment from us unnecessary.

Our readers must, we fear, be already wearied of the subject of the various grades of practitioners proposed to be created under the new Bill, comprising the "Licentiate," or general practitioner of *twenty-one*,—the "Surgeon" of *twenty-five*,—and the "Physician" of *twenty-six*. In order to meet the difficulty urged respecting the age fixed for the "physician," the framers of the bill have added an intermediate class, "inceptors in the Faculty of Medicine," at the age of *twenty-two*. In fact these are merely "Licentiates" under another name, with one year added to the age. The distinction between this class and that of the licentiates, except in name, is not very apparent, and the necessity for its creation is questionable.

It has been already explained that a

double registration is not allowed under the new bill. Thus, with respect to future practitioners, if the licentiate become a surgeon or physician, he will not be permitted to have his name on the list in a double capacity. He must make his election,—a rule not carrying with it the injustice which exists in this respect with regard to present practitioners.

Under the 20th clause of the bill, every registered "Licentiate in medicine and surgery" becomes *ipso facto* a member or licentiate of the Royal College of Surgeons, in that part of the United Kingdom in which he shall have received his letters testimonial,—so that the future "licentiates in medicine and surgery" will have the same *status* as the present members of the College, who have been excluded from the fellowship, except that they cannot register themselves as surgeons. There is no part of the bill, however, as we shall presently see, which prevents them from assuming that title.

The new measure, we are glad to perceive, creates a power of granting medical degrees by special license without examination. The restrictions on the granting of medical degrees will be found in the 22d clause, and it is here expressly provided that the Council of Health may allow such degrees to be granted by special license. We have long thought that, under proper regulations, there should be a power in the Universities to grant honorary degrees. Let us take the case of a licentiate or a surgeon who may have passed twenty or thirty years in the successful practice of his profession. He might wish in the decline of life to enjoy the title of M.D.; but so long as a fresh course of study and another examination are rendered compulsory, it may be utterly impossible for him to obtain it. The time for re-studying his profession to encounter an examination, must

be considered as long since passed, in the case of one who has gone through a successful practice, and acquired a good professional reputation. What more than this could reasonably be demanded as a qualification, of a man who wished to have the degree conferred upon him? Some might consider it an empty title, but the public would not the less regard it, when thus bestowed, as a mark of honour and respect. Again, the examiners appointed by the Colleges may be actually the professional juniors of the old licentiate, and may not be so well known either to the public or profession. It could not be expected that, for the sake of a degree, the possession of which he might reasonably desire and justly merit, any one would submit to an examination under these circumstances. There are, we believe, many in the profession, some engaged in practice, and others who have devoted themselves to the scientific cultivation of medicine, who would gladly avail themselves of this privilege; and, by giving this power to a University, only under the special license of the Council of Health, it does not seem probable that it can ever be abused.

The question has been asked—whether a person registered under one denomination, will expose himself to any penal consequences by assuming another name or title than that under which he is actually registered? For instance, can a licentiate be punished for falsely pretending to be, or taking the name of, physician or surgeon? Judging from the words of the 35th clause, it would appear that a false pretence of this kind, is only a misdemeanor or offence in an *unregistered* person:—

“And be it enacted, that every unregistered person who shall wilfully and falsely pretend to be, or take or use the name or title of, physician, doctor, bachelor, or inceptor in the faculty of medicine, or surgeon or licentiate in medicine and surgery, or apothecary, or any name, title, or addi-

tion implying that he is registered under this Act, or recognised by law as a medical or surgical practitioner, shall be deemed guilty of a misdemeanor, in England and Ireland, and in Scotland of a crime and offence, and being convicted thereof, shall be punished by fine or imprisonment, or both, as the court before which he shall be convicted shall award.”

We do not think, however, from what we know of the profession, that the false pretence is likely to be so limited; although, if care be taken in the examination of licentiates, the assumption of another title by a *registered* person can hardly be attended with any detriment to the public.

With regard to any medical title assumed by other persons *not registered*, it will be seen that the words of the clause strictly limit the offence to the assumption “of any name, title, or addition,” implying that he is registered under this Act, or recognised by law as a medical or surgical practitioner.” The restriction thus put upon the false pretence appears absolutely to neutralize it. A man may assume numerous titles implying that he is a *practitioner in medicine and surgery*, and these titles may have the same effect with the public as those enumerated in the clause, but it may be very questionable whether they will be considered to imply “that he is registered under the Act;” and without this, there is no legal offence.

QUARANTINE LAWS.

It appears that the governments of France and England are about making considerable improvements in the mode of carrying out the laws of quarantine. The Austrian medical officers appointed by that government, have not yet made any report of the efficiency of the present system of quarantine in preventing the importation of plague. All are agreed that some mitigation in these laws is not only necessary to commerce,

but actually called for by the altered views on the subject of contagion now entertained by the medical profession.

ROYAL COLLEGE OF SURGEONS.

THE NATIONAL ASSOCIATION OF GENERAL PRACTITIONERS IN MEDICINE, SURGERY, AND MIDWIFERY.

To the President, Vice-Presidents, and Council of the Royal College of Surgeons of England.

GENTLEMEN,—We are requested by the Committee of the National Association to forward you a copy of the following resolution, unanimously passed, at a very numerous meeting of general practitioners, held at the Hanover Square Rooms, on Friday last, the 14th inst. :—

“Resolved, That the National Association records its solemn protest against the proceedings of the Council of the College of Surgeons, in obtaining, and in subsequently carrying out, the recent charter, whereby a few gentlemen have been arbitrarily elevated over the heads of others previously their equals in professional rank—senior to many of them as members of the college, and not inferior to most of them in scientific and practical knowledge.”

And, in compliance with a suggestion offered by the Right Hon. Sir Jas. Graham to a deputation of the National Association on the 14th of February, to request the favour of an early answer to the following inquiries :—

1. Is the Council of the College prepared to reconsider their charter, and to place those members who were in practice before it was granted, on a level with the fellows ?

2. Is the Council of the College disposed to admit to its board a fair representation of the members of the College in general practice ?

3. Would the Council of the College be willing to co-operate with the National Association in the formation of a Court of Examiners in medicine, surgery, and midwifery ?

And as a further duty has now devolved upon the committee, by a resolution of the general meeting “to use every practicable means to obtain a charter of incorporation for the general practitioners,” they are desirous to ascertain how far, and in what manner, the Council of the College of Surgeons may be disposed to assist the National Association in the attainment of its object.

Should the Council be pleased to entertain these propositions, the Committee will be happy to appoint a deputation of its mem-

bers for the purpose of an early conference, on a subject so important to the best interests of the profession and the public.

We have the honour to remain, gentlemen,

Your most obedient servants,

JAMES BIRD,

HENRY ANCELL,

Hon. Secs. *pro tem.*

March 20.

To the Secretaries of the National Association of General Practitioners, &c.

GENTLEMEN,—The Council of the Royal College of Surgeons of England have the honour to acknowledge your letter of the 20th of March.

It exhibits, first, a resolution of the gentlemen styling themselves the National Association, viz.—“That the National Association records its solemn protest against the proceedings of the Council of the College of Surgeons, in obtaining, and in subsequently carrying out, the recent charter, whereby a few gentlemen have been arbitrarily elevated over the heads of others, previously their equals in professional rank, senior to many of them as members of the College, and not inferior to most of them in scientific and practical knowledge.”

It next recites three questions, viz. :—First—“Is the Council of the College prepared to reconsider their charter, and to place those members who were in practice before it was granted on a level with the fellows ?”

Second—“Is the Council of the College disposed to admit to its board a fair representation of the members of the college in general practice ?”

Third—“Would the Council of the College be willing to co-operate with the National Association of General Practitioners in the formation of a Court of Examiners in medicine, surgery, and midwifery ?”

And the letter states, lastly, that “as a further duty has now devolved upon the committee, by a resolution of the general meeting, ‘to use every practicable means to obtain a charter of incorporation for the general practitioners,’ they are desirous to ascertain how far, and in what manner, the Council of the College of Surgeons may be disposed to assist the National Association in the attainment of its object.”

Such is the substance of the communications addressed to the Council of the Royal College of Surgeons, and though they might claim exemption from replying to propositions which can only legitimately emanate from the whole body, or at least from a majority of the practitioners, whose interests are involved, they willingly forego this plea, however valid, in finding connected with the National Association many members of the College, whom they individually esteem, and

in deference to the highly respectable class from which the Association has been formed.

In noticing the protest of the National Association, the Council have to remark, that the formation of the new class of fellows was an obligation imposed upon them by Her Majesty's Government, for the purpose of providing an electoral body. The principles on which they acted, in conformity with the provisions of the recent charter to that effect, are sufficiently explained in the following paragraphs, quoted from a statement, dated May 25th, 1844, which was circulated among the members:—"The Council entered on the duty assigned to them by the provisions of the charter, with a full sense of its invidious nature. They were aware that of those not included in the list of fellows a considerable number would feel and express dissatisfaction. But they have done what was required of them to the best of their ability, and have made the selection altogether on public grounds, without favour or prejudice, and uninfluenced by private motives. The great majority of the members of this College are less engaged in the practice of surgery than in that of medicine, midwifery, and pharmacy, and many of them have arrived at well-deserved eminence in these latter departments of the medical profession. But the Council, keeping in view the objects for which the College was especially established, have felt it their duty, in the nomination of fellows, to regard chiefly the qualifications of members as practitioners in surgery, or as improvers of those sciences which tend to its advancement."

Thus was the principle which guided the Council in discharging this responsible duty, publicly proposed and submitted to the opinion of the members of the college, whilst the power of nomination still remained; and the principle unhesitatingly avowed by the Council as that upon which they acted, and upon which they feel bound to act, were they entrusted with the office of reconstructing the schedule of fellows, is that of the selection of those who have distinguished themselves by the cultivation of surgery and its collateral sciences.

If, then, the first question which the National Association proposes has reference to a reconsideration of the charter recently granted exclusively for the purpose of placing all the members who were in practice before it was granted on the list of fellows, or, in other words of the letter, "on a level with the fellows," the Council earnestly protest against the scheme as essentially contravening the principle which they deemed it their duty to adopt; and they profess themselves unable to understand the grounds of a proposal which, in their deliberate judgment, would, by the lavish and indiscriminate grant of the fellowship, effectually destroy a distinction

which, if conferred on all, would be no distinction, and could confer no honour on the individual possessor.

It is true, indeed, that the alleged injustice of elevating a limited number of the members to a higher professional rank than their colleagues, would have been obviated, and that the 12,000 or 14,000 members who might thus have been created fellows would nominally possess a superior grade to those members admitted subsequently to September 1843; but it is equally plain that these newly created fellows would not have obtained their rank by any authorized claim to superior surgical attainments, since their qualifications could only have been tested by examinations, which always have been, and must ever be, conducted on the principle imperiously demanded by the needs of society—namely, that the majority of surgical practitioners shall be required to possess at least, but not necessarily more than that amount of information and skill which is absolutely required for the ordinary exigencies of surgical ministrations.

The Council, therefore, under a sense of justice to their future members, who will possess the same qualification as the present members, and under the obligation which the institution of the novel honorary degree imposed, necessarily sought other evidence of distinguished surgical attainments than the ordinary diploma, which attests only the amount of proficiency required of all. And those who feel disappointment would do well to bear in mind that they have been deprived of no privileges nor corporate rights, which they acquired, or hoped to possess, in becoming members of the college. They will recollect that in applying for their diploma they were not compelled to do so by any legal enactment, as they would have had an equal right to practise surgery without it, and they will probably admit that their sole inducement was that of obtaining in the diploma a testimonial to which the names of some of the principal hospital surgeons and teachers were appended. And let them not forget that one of the first acts of the college was to make a by-law, which was sanctioned by the proper authorities, excluding practitioners in pharmacy and midwifery from the governing body of the college, that they obtained their diploma under this known condition, and that they actually signed this and other by-laws, and swore to observe them.

It has been said and reiterated, as it is intimated in the protest of the Association, that the omission from the list of fellows implies professional degradation; the Council, however, cannot but think this feeling is grounded on a misconception of the nature of the qualification for the fellowship, already explained. Many of those who have not

been included in the list of fellows are well known to have attained the highest eminence, and to enjoy the highest reputation as practitioners in other departments of the profession; and the Council cannot believe that the interests, personal and professional, of members, can be injuriously affected, or their merits lowered in the estimation of the neighbourhood in which they reside, by the vicinity of those nominated as fellows, since the fellowship is simply an attestation of the surgical reputation, which they already possessed; and this distinction will be in a great degree effaced by the provisions of the medical bill now under the consideration of the legislature; since, in conformity therewith, every member of the college may, if he please, be registered as a surgeon, whether he be in general practice or not, and may thus be presented to the public in the same list and under the same title with the President, Councillors, and other Fellows of the College.

The Council deeply regret that their motives should have been misconstrued, and that so many of the members of the college should disapprove of their proceedings, but they trust that a dispassionate reconsideration of the subject will not fail to convince the Association that it would be difficult, if not impossible, to form a class of Fellows, in which the requisite respectability of the class should be preserved, without adopting a principle of selection no less invidious than that which has drawn so much obloquy on the Council. It has been contended, and the principle has been more than once agitated in the discussions in the Council, that the senior members admitted antecedently to a given date should form wholly or in part the list of fellows. But where was the line to be drawn that would have been satisfactory to those excluded?

It has been also proposed, that as vacancies occurred, the places might be supplied until all the members admitted before September, 1843, had been placed in succession on the list of fellows. But it behoves those who contend for any mode of forming a list upon the simple principle of seniority without selection, and still more those who urge the indiscriminate admission of all members to the fellowship, to weigh well the insurmountable objections to their scheme. Would they include those who have violated the laws of their country? Would they include professional paupers, and persons of notoriously bad character? Would they include the puffers and vendors of nostrums and secret remedies, and the writers of indecent advertisements? Would they include surgeons' assistants, or those who have connected themselves in business with druggists and chymists? Would they include the retail shopkeepers, who expose for sale cattle-drugs

and perfumery? Would they, finally, include or exclude all those who keep open shops, and who, though ill sustaining a professional character, are yet not chargeable with any moral disqualification? In short, would the National Association, in conformity with their views, advise admitting all such as members of the proposed college of general practitioners, without discrimination or selection, merely because they are members of the College of Surgeons, or licentiates of the Apothecaries' Company?

These are grave questions, which cannot be dismissed by a simple negative or affirmative, and would require for their solution nicer distinction than the Association seems to have anticipated; and, on second thoughts, the Association may perhaps forgive the Council for ridding themselves of the difficulties attendant on the investigation of comparative respectability, by adopting a surgical qualification, and this only. And the Council firmly trust that the formation of a class of fellows, selected, in the first instance, for their character as accomplished surgeons, and its dignity maintained and perpetuated by the admission only of persons of higher education and extended experience, will, without fail, increase the estimation of surgeons generally, and no less of every member of the college.

In respect to the second question—viz. "Is the Council of the College disposed to admit to its board a fair representation of the members of the college in general practice?" the Council beg to remind the National Association that the College of Surgeons is not, and never was intended to be, a college of general practitioners; and that the members of the college, under whatever denomination, have no other recognised connexion with the college than as surgeons. The College of Surgeons is strictly an institution for the promotion of surgery, practical and scientific, and for testing the qualifications of those who intend to practise surgery. It is true, that, under the existing arrangements of the medical profession in this country, the majority of its members are and will be general practitioners: it is true, also, that many of the provincial hospital surgeons, though practising the other branches of the profession, have eminently distinguished themselves by their scientific cultivation of surgery; but it will scarcely be doubted that the greater number of those who conjoin with the practice of surgery that of medicine, pharmacy, and midwifery, from the multifarious nature of their pursuits, and from the unceasing demand upon their time and attention in their laborious and responsible avocations, will probably want the opportunities and inducements which are required for the special cultivation of surgery, and will scarcely be found to possess the quali-

fications for regulating the education of surgeons, and for promoting the great public objects for which the college was founded.

The third question, viz.: "Would the Council of the College be willing to co-operate with the National Association of general practitioners, in the formation of a Court of Examiners in medicine, surgery, and midwifery," was probably intended to stand thus:—would the Council of the College be willing to co-operate with the proposed new Corporation of general practitioners, in the formation of a Court of Examiners in medicine, surgery, and midwifery? The Council, then, understanding this to be a proposal for forming a joint board of physicians, surgeons, obstetricians, and pharmacists, for the examination of general practitioners, have to express their readiness to submit to the enactments of the Legislature, or to the regulations of the Council of Health, but they cannot but anticipate the inconvenience that would result from carrying on the examinations on anatomy, medicine, surgery, midwifery, and pharmacy at one board, and at one sitting, instead of distributing the subjects into distinct examinations; and they believe so protracted and multifarious a demand upon the mind of the candidate would be calculated to perplex and bewilder even the best-informed student.

If, however, the aim of the Association be, when explicitly stated, that general practitioners are to be eligible to, or to constitute at all times a certain proportion of, the Court of Examiners of the College, the Council are bound to reply to the third as to the second question, and to state their unqualified conviction that the proposal of converting the College of Surgeons into a college of general practitioners; or depriving the college of its distinctive character and office, and of substituting for these a medley of function, each of which requires for its performance its duly qualified functionaries; that the proposal of merging the College of Surgeons in a college of practitioners in medicine, surgery, pharmacy, and midwifery, would defeat the very object for which the college was instituted, and would go far to deprive the country of the best and perhaps the only mode of maintaining the efficiency of the surgical department of the profession. And if the class hitherto existing of teachers of anatomy and surgery is to be preserved; and the council cannot believe that the Association has forgotten its paramount claims to public patronage and protection; if the interest alike of the profession and country point out the necessity of fostering a class of men devoted to the absorbing pursuits of science, without whom, indeed, the very sources of professional knowledge would be dried up; if adequate encouragement is

to be given to the long, toilsome, and self-denying preparation for the offices of lecturers and surgeons of hospitals, under circumstance in which the prizes are few and the reward distant and uncertain,—it is scarcely too much to expect that the seats to the Council and in the Court of Examiners should be reserved for those whose habits and pursuits best fit them for the duties which an institution for the promotion of scientific surgery implies.

Lastly, with regard to the proposed incorporation of the general practitioners, as a separate body or college, the Council have as little the wish as the power to prevent them from obtaining a charter, and would offer no objection to the incorporation of a body for the performance of the functions hitherto executed by the Society of Apothecaries; but, actuated as the Council are by the desire of promoting the usefulness and respectability of the general practitioners, they dare not, consistently with their sense of duty to the profession, and with their regard for the interests of the general practitioners themselves, hold out any hope of co-operation with the National Association in a plan for instituting a corporation which would supersede the defined and recognised functions of the existing College of Surgeons.

And they entreat the Association to bear in mind that by the provisions of the recent charter, and of the bye-laws of the college in conformity therewith, the union of general practitioners with the college will in future be attained by means which cannot fail to raise their qualifications and to promote their respectability. The fellow of the College who had obtained his degree at 25 years of age, after a liberal and extended education, will not be precluded from practising, in conjunction with surgery, the other branches of the profession; and a general practitioner, who may have been deprived of the opportunity of obtaining his degree at 25, may become a fellow, after a definite number of years of practice.

That many, or all, the members of the college, will take advantage of these opportunities of honourable distinction, is the sincere hope of the Council! And in tendering their best wishes for the welfare and increased respectability of the general practitioners, they take leave to express their conviction that the claim which they fearlessly urge to disinterested motives, and a deep sense of their responsibility in the government of the college, will be cheerfully accorded in calmer times by an enlightened profession.—I have the honour to be, gentlemen, your most obedient servant,

E. BELFOUR, Sec.

Royal College of Surgeons of England,
3d of April.

[We wish we could say that the answer

returned by the Council of the College to the appeal here made to them was satisfactory. With the list of "Fellows" before them, it surprises us to find the Council asserting, that in the "institution of the novel honorary degree" they "necessarily sought other evidence of *distinguished surgical attainments* (!) than the ordinary diploma, which attests only the amount of proficiency required of all." Among the "Fellows" are some whose names had never been heard of in the profession before—members with diplomas of a few years' standing, the pupils of some who were excluded, and whose only ostensible title to the honour appeared to be, that on such a day in such a year, they accidentally occupied the office of assistant-surgeon or demonstrator of anatomy in some provincial hospital or infirmary, &c. If the College had done as it professes, *i. e.* have taken only "*distinguished surgical attainments*" as the qualification for the fellowship, there would not have been the present outcry in the shape of complaint or remonstrance, which, judging by the very numerous letters we have received, proceeds as much from fellows of the College (to their credit be it spoken) as from general practitioners. The Council may, if they please, easily extricate themselves from their difficulty, without admitting as fellows, men who have been guilty of felony—quack-surgeons—surgeon-chemists and druggists—surgeon-shopkeepers, &c. To oppose this a difficulty to the admission of many highly respectable and worthy members, as fellows, is a mere pretence for the denial of justice. By excluding a class of unworthy members, they may undoubtedly create dissatisfaction among them; but is this a reason for allowing the present just cause of discontent to prevail among a large majority of the respectable members of the College, who do not fall under any one of the denominations mentioned? We think not. The answer simply amounts to this: There are some of you who are unworthy of the fellowship; and therefore we will admit none. It is not considered, that the same objection would have applied with equal force to a large number of those whose names have been arbitrarily placed on the list of fellows.—*ED. GAZ.*

PROPOSED CHARTER
OF THE
ROYAL COLLEGE OF PHYSICIANS
OF ENGLAND.

*Statement regarding the Licentiates
extra Urbem.*

SIR James Graham having announced her Majesty's intention of extending the jurisdiction of the Royal College of Physicians in London over England and Wales, and of constituting it the College of Physicians of

England, it has become of importance to the *permissi extra urbem* of that College to inquire what are their existing rights and privileges, and how far those rights may be affected by the proposed charter.

The powers of the College of Physicians of London are derived from the Act of the 14th and 15th of Henry VIII. By this statute it was ordained, "that no person from henceforth be suffered to exercise or practise in physic, until such time as he has been examined in London by the president and three of the said elects, except he be a graduate of Oxford or Cambridge, which hath accomplished all things for his form without any grace." By the same Act, the jurisdiction of the college in London and within seven miles thereof (granted by charter four years before) was confirmed. The two classes are therefore equally ancient, and have equal privileges within their respective limits; but as the common seal of the college is not appended to the letters testimonial of the *extra urbem* licentiates, they are, in common with the graduates of Oxford and Cambridge, excluded from practice within the metropolitan boundary. On the other hand, it is equally manifest that as the *intra urbem* licentiates are not examined by the president and elects, as expressly required by the Act, but by the president and censors, their letters testimonial have no legal force throughout England.

It thus appears that the statute rights of the *extra urbem* licentiates are precisely equal to those of the *intra urbem* licentiates, and of the graduates of Oxford and Cambridge; that they are the only physicians practising throughout England (London excepted) created by the letters testimonial of the college; and that they have always been independent of its jurisdiction. It follows, then, that if that jurisdiction be extended by charter over England, the *permissi extra urbem*, if they have not a fair claim to constitute the commonalty of the proposed College of Physicians of England, have at least an undeniable claim to incorporation with the *permissi intra urbem* on equal terms.

It may be objected, that there are *permissi extra urbem* who are not graduates in medicine. But this objection is altogether futile; for the law of England has never recognized that degree as of itself constituting the legal qualification to practise. Even medical graduates of Oxford and Cambridge are required by the statutes of those Universities to be examined for a license *ad practicandum*; and it is by this license that they are authorised to practise "*per totum regnum Angliæ*." The college itself has always acted on the principle that the license alone creates the physician, by invariably requiring all candidates, whether graduates or not, to submit to an examination.

Nor is the claim of the *permissi extra urbem* to an equality of rights in the proposed new charter with the *permissi intra urbem*, invalidated by the fact that the latter have paid a larger sum for their license, for they have value received in the monopoly of metropolitan practice they enjoy, and in the exclusive use of the college, and its museum and library. If the *permissi extra urbem* be admitted to a share in both, they should only be called upon for an additional payment when, by a residence in the metropolis, they will be in a position to avail themselves of those privileges.

Neither can this claim be resisted on any fancied grounds of superiority on the part of the *intra urbem* licentiates. It is true that the latter are examined by a different board; the curriculum of study is, however, the same for both, and the *extra* licentiates are examined by the highest authorities of the college, namely, by the president and the president elects. It would, indeed, be a monstrous libel on the president and his colleagues, (they being, according to the charter, "the most cunning and expert of the faculty in London," (to suppose such dereliction of duty on their part, as would be implied in the insinuation that the professional qualifications of the *permissi extra urbem* are inferior to those of the *permissi intra urbem*.

For these reasons, then, the *permissi extra urbem* demand that they be subjected by the new charter only to such regulations and the payment of such fees as may be required of the *permissi intra urbem*.

Extra licentiates of the college, desirous to co-operate in obtaining these objects, are requested to communicate their names forthwith to one of the following gentlemen:—Dr. Clay, Manchester; Dr. Davies, Hertford; Dr. Hitch, Gloucester; Dr. Laycock, York.

ROYAL SOCIETY,

Saturday, April 5.

THE last Soirée of the Royal Society for the season took place on Saturday last, at the house of the noble President. It was attended by a large number of noblemen and gentlemen, including nearly all who have acquired any celebrity in literature, science, and art. The members of the medical profession were very numerous. Among the scientific discoveries which were made subjects of illustration was the newly-invented art of Anastatic printing, of which, so far as it depends on chemical principles, we here give a brief description. The whole of the process was carried on in one of the rooms, and painted sheets, which would have taken a considerable time for composition, were transferred to zinc, and perfect im-

pressions drawn from them in an incredibly short period. The art itself is essentially founded on chemical principles, and applies to the copying of all documents in which oil is the basis of the ink used. The printed sheet or engraving to be copied is sponged with nitric acid diluted with eight parts of water: it is then pressed in folds of blotting paper, and deprived of nearly the whole of its moisture. When nearly dry, it is placed with its printed face downwards on a clean surface of luminated zinc, and submitted to very powerful pressure in a roller press. The pressure is so great, that the layer of zinc becomes curved by the process. The surface of the zinc is acted upon by the diluted nitric acid, and finely corroded in all those parts, corresponding to the unprinted portions of the sheet, the oil preventing the inhibition of the acid in the printed parts. This leaves on the zinc an embossed or slightly raised copy of the whole of the printed letters or engraving. A liquid (said to be mucilaginous) is then rubbed over the plate; this soaks into the porous or corroded parts, and leaves the raised portion, which afterwards receives printers' ink from a roller in the usual way, and then yields impressions as if it were a closely set mass of type. The pressure would speedily lead to the obliteration of the raised metallic letters, but for the occasional application of another liquid (described as a mixture of phosphorous and phosphoric acids), which is stated to remove the zinc from the already corroded portion of the plate.

The most remarkable part of this discovery is, that a printed page nearly effaced and illegible may be made to yield a perfectly clear and distinct copy. This depends on the fact that it is the oil in the printed paper which excludes the diluted acid; so that if a page were printed with colourless oil, the action on the plate would be the same.

Among other subjects of interest were two of Ross's microscopes, in one of which was exhibited metallic copper crystallized in tetrahedra, and procured by the following singular process. Glass, coloured by oxide of copper, was melted, and then stirred with an iron rod; the copper was thus separated in the metallic state, and became crystallized during its separation. The iron is converted to peroxide, which gives no colour to glass unless it be present in very considerable quantity.

An apparatus for carving artificial palates, with teeth, in ivory, was also exhibited. A model of the palate is taken in wax, and from this a composition mould is afterwards procured in the usual way, and fixed in the machine. It is impossible, in a short space, to give a description of this ingenious apparatus—the invention of Mr. Tomes, but the principle on which it acts is some-

what similar to that of the anaglyphographic or medallion engraving. A facsimile of the palate is thus taken in ivory. Some palates in ivory were shewn which exhibited all the minute elevations and depressions of the natural palate, and indeed, but for the colour of the material, might have been mistaken for it. This invention may ultimately have some important surgical applications.

DR. THEODORE GORDON.

SCIENCE and humanity have to deplore the loss of this able physician and most excellent man; he died at Brighton, whither he had gone in the hope of recruiting his strength, on the 30th ultimo, in the 59th year of his age.

Dr. Gordon was a native of the north of Scotland, and descended of a good if not a very wealthy family. He received the rudiments of his classical and professional education in Aberdeen, and subsequently went to Edinburgh, where he attended the lectures of Monro, Gregory, Rutherford, and the other eminent professors of that distinguished medical school. In the autumn of 1803 Dr. Gordon entered the army; and in the following year, as Assistant-Surgeon to the 91st Foot, he served abroad, first in Hanover, and then in Portugal, where he was present at the battles of Rolicca and Vimiera, and narrowly escaped with his life when cast away in the river Douro. Appointed Surgeon to the 89th Foot in 1809, he was present at the unfortunate affair of Fuengerola, under Lord Blaney. With the 4th Foot, or King's Own, into which he exchanged in 1811, he served in Ceuta, in Africa, and was one of the Commission for the cession of that fortress to Spain. Whilst stationed in Ceuta he again narrowly escaped with his life, having fallen into the hands of the Moors while out with his gun; he got off with a sound beating, however, for a dog of a Christian as he was. Ceuta abandoned by the British, Dr. Gordon accompanied his regiment back to the Peninsula, and had the honour of accompanying the Duke of Wellington through a large portion of his career of victory, having been present at the battle of Salamanca, in the retreat from Burgos, the battle of Vittoria, the siege of St. Sebastian, and the passage of the Bidassoa, in which last affair, while in medical charge of the 5th Division, he was severely wounded in the head and neck.

In 1813 Dr. Gordon was appointed Surgeon to the Forces, and had charge of York Hospital. In 1815 he was again engaged in foreign service; and at Brussels, after the battle of Waterloo, had the superintendence of the French wounded. He accompanied

the advance on Paris, and in that city had charge of the military hospital of St. Louis. Promoted to the rank of Physician to the Forces in the autumn of 1815, in the beginning of 1816 he was appointed Professional Assistant in the Army Medical Board Office, the arduous and important duties of which he continued to perform until within a few weeks of his death.

Dr. Gordon's long and able services were finally crowned, in 1818, by the Deputy Inspector-Generalship of Hospitals, which was the highest rank he attained.

Dr. Gordon's life was one of action, not of meditation or closet study; he has therefore left little in the shape of writing by which the world at large or posterity can judge of him as a medical man. Those who knew Dr. Gordon most intimately, however, appreciated his abilities most highly; he had a keen eye for the discrimination of disease, and what art could do to bring relief, he had always at hand. It was as a man, as a friend, however, that Dr. Gordon engaged the largest portion of the sympathies and affections of his contemporaries. Probably no man ever lived who had a larger and more attached circle of friends than himself; he was trusted, beloved, honoured, by all who knew him. His judgment in the affairs of life was eminently clear and practical; his disposition was at once open, kindly, generous; one of the warmest and most faithful of friends, he may truly be said to have passed through life without having had an enemy!

Dr. Gordon had laboured under an affection of the heart for more than twenty years before his death; he always believed himself that he should die of this disease. He did not prophesy truly of the cause of his end, however; for an attack of bronchitis, dependent in all probability on the presence of tubercles in the lungs, was followed by an accession of acute dysentery, which never ceased until it had worn him out. He was attended in his last illness, with the greatest devotion, by his old friend, Mr. Johnson, Surgeon-Major, late of the Grenadier Guards, and by Dr. James H. Pickford, late Assistant-Surgeon in the same corps; and was also visited three times a week by his attached friends, Sir James Clark and Dr. Willis. The attack had a formidable aspect from the first, however, and all who saw him feared for the issue.

On a post-mortem examination, which was performed by Dr. Pickford, extensive tubercular depositions were found in both lungs; the heart was greatly enlarged, particularly on the right side, extremely thin in its walls, and soft in its substance; the large intestines were covered, from the caput coli downwards, with extensive and deep ulcers.

MEDICAL INTELLIGENCE.

WE have been informed that the bill for regulating the medical profession will be brought into the House of Commons on Monday next, the 14th instant.

DISCHARGE OF A LUMBRICUS FROM THE MALE URETHRA.

DR. PETER F. CLARK has recorded in the *New York Journal of Medicine*, (May 1844,) a case in which a lumbricus teres eleven inches long was discharged from the urethra of a man thirty-three years of age. Dr. C. thinks that eighteen months previously, at which time the patient laboured under symptoms of disease of the bladder, a communication was formed by ulceration between that organ and a contiguous surface of intestine, through which the worm had passed from the latter into the former organ.—*American Journal of the Medical Sciences*.

EXAMINERSHIPS ON CHEMISTRY IN THE UNIVERSITY OF LONDON.

PROFESSOR BRANDE has been appointed to the Examinership on Chemistry, vacant by the death of Professor Daniell, so far as regards Medicine, and Professor Graham, of University College, has been appointed to the Examinership of Chemistry in Arts.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

List of Gentlemen admitted Members, April 4.—R. Ripley.—E. D. Rudge.—R. Tiffin.—J. W. H. Mackenzie.—W. R. S. Lane.—W. H. Pilkington.—J. A. Elliott.—E. Lawes.—P. Jones.—T. Wright.

APOTHECARIES' HALL.

Gentlemen who have obtained Certificates, April 3.—W. D. Wathen, St. David's, Pembrokehire.—F. Fitch, Sudbury.—R. T. Cobbold, Saxmundham.—T. H. Watt, Deal, Kent.—W. Westall.—C. G. Mott, Derby.—J. Bromfield, Whitchurch, Salop.—E. Noyce, London.

NOTICES TO CORRESPONDENTS.

WE shall be glad to hear again from Mr. R. H. Meade, of Bradford, Yorkshire. His Clinical Observations will be inserted next week.

If Δ can furnish us with any cases in which his plan of treating diabetes has succeeded, we will give them insertion.

The Memoir of the late Dr. Heberden will be inserted.

"A Subscriber" will perceive from our leading article, that "a licentiate" may assume the title of "surgeon" (as the bill at present stands), although he cannot be registered as such.

Received—Cases by Mr. Collier; the

Hereford Memorial; "Lector;" "A Practitioner;" the Wolverhampton Petition; the Liverpool Resolutions.

We regret that we cannot notice the circumstances to which Vindex refers. Dr. F. need be under no apprehension of an attack in the Mesmeric Magazine affecting him in the opinion of the profession. The journal only finds circulation among the class of impostors who record their own doings in it.

MORTALITY OF THE METROPOLIS.

Deaths from all causes registered in the week ending Saturday, March 29.

ALL CAUSES	1188
SPECIFIED CAUSES	1182
I.—Zymotic (Epidemic, Endemic, and Contagious) Diseases, 195; among which, of—	
Small Pox	32
Measles	30
Scarlatina	30
Hooping Cough	37
Croup	7
Thrush	5
Diarrhoea	12
Dysentery	1
Cholera	1
Influenza	3
Typhus	31
II.—Dropsy, Cancer, and other Diseases of uncertain or variable Seat, 115; among which, of—	
Hæmorrhage	3
Dropsy	30
Scrofula	4
Cancer	11
Atrophy	20
Debility	13
Sudden Deaths	23
III.—Diseases of the Brain, Spinal Marrow, Nerves, and Senses, 197; among which, of—	
Hydrocephalus	42
Apoplexy	32
Paralysis	34
Convulsions	63
Insanity	3
Delirium Tremens	0
IV.—Diseases of the Lungs, and of the other Organs of Respiration, 396; among which, of	
Pneumonia	104
Hydrothorax	9
Asthma	43
Phthisis or Consumption	164
Diseases of the Lungs, &c.	21
V.—Diseases of Heart and Blood-vessels	47
VI.—Diseases of the Stomach, Liver, and other Organs of Digestion, 71; among which, of—	
Teething	19
Gastritis	1
Enteritis	13
Tabes	4
Hernia	0
Disease of Stomach, &c.	3
Disease of Liver, &c.	11
VII.—Diseases of the Kidneys, &c.	7
VIII.—Childbirth, Diseases of the Uterus, &c. 12; among which, of—	
Childbirth	10
Disease of Uterus	1
IX.—Rheumatism, Diseases of the Bones, Joints, &c.	6
X.—Diseases of Skin, Cellular Tissue, &c.	1
XI.—Old Age	84
XII.—Violence, Privation, Cold, and Intemperance	51

WILSON & OGILVY, 57, Skinner Street, London.

THE
LONDON MEDICAL GAZETTE,

BEING A
WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

FRIDAY, APRIL 18, 1845.

LECTURES
ON THE
NATURE AND TREATMENT OF
DEFORMITIES,

*Delivered at the Royal Orthopædic Hospital,
Bloomsbury Square,*

By R. W. TAMPLIN, F.R.C.S.E.
Surgeon to the Hospital.

*Angular curvature of the spine — Pott's
disease: Nature of—Treatment. Treat-
ment of angular curvature of the spine.*

I MUST now draw your attention to angular curvature of the spine, of which an immense number of cases present themselves at this Charity. This deformity arises from disease and ulceration of the bodies of the vertebræ, for the true knowledge of which we are indebted to the late Mr. Pott; and as the deformity is, generally speaking, the first thing which attracts the attention of the parents or friends of the patient, and also that which induces them to apply for relief, a large proportion of cases attending here are suffering from active disease, as well as the curvature consequent upon it: it becomes therefore necessary that I should briefly allude to it. This affection, then, consists of ulceration of the body or bodies of one or more vertebræ, and is found to attack any portion of the spine from the atlas to the sacrum; most frequently the dorsal vertebræ; secondly, the lumbar; and lastly, the cervical. It generally occurs in weak and unhealthy children, who are already predisposed, from any slight casualty, to diseased action. Not unfrequently it is combined with the tubercular diathesis, which will be found occasionally in the active stage; and in all instances that peculiar condition called "strumous" is but too evident. The strumous and tubercular, however, to my mind, differ but little from each other.

The first circumstance, then, that attracts
907.—xxxv.

attention, and for which you will be consulted, is a projection in one or other of the situations mentioned, sometimes so slight as scarcely to attract attention, and without any external evidence of disease beyond the simple projection. This projection, however, when the result of disease and loss of substance of the bodies of the vertebræ, is *always* angular; from which fact it may be at all times recognised, even in this its most incipient state, and by which it may be distinguished from the posterior curvature of the spine common in children, but which exists without any disease affecting the vertebræ. It is of great importance that you should distinguish the one from the other, especially in the incipient stage, as by so doing a stop may be put to the progress of the ulceration, and of course deformity, as well as the serious consequences attending its progress altogether prevented. As the ulceration proceeds, the angle increases, and becomes more or less acute, according to the number of the vertebræ affected, and the loss of substance sustained. The spine being no longer capable of bearing the superincumbent weight of the head and shoulders, an additional source of irritation is thus mechanically brought into operation, which not only increases the amount of the deformity, but also that of the disease itself,—an important fact to be borne in mind in the treatment, as I shall presently point out to you. In the commencement of this affection the patient suffers very little pain—at all times some—which is characterised by an occasional scream and general restlessness, not sufficiently defined to attract attention to the spot. As it proceeds, however, the pain becomes more severe, and is increased upon motion of any kind; and as it is scarcely possible for the spine to be kept at rest by the efforts of the patient or friends simply, in many instances, the general health suffers from the constant irritation thus kept up, the appetite fails, the bowels are irregular, the secretions unhealthy, and, unless relief is

obtained, hectic supervenes, abscesses form, and death puts a period to their existence. As the ulceration affects the anterior surfaces of the bodies of the vertebrae, of course it is in this situation that the matter is formed in cases of abscess, the existence of which is generally indicated by an enlargement and thickening on each side of the projection, as well as above and below it, and also by the increased disturbance in the general health. As the matter increases in quantity, it descends, principally by gravitation, behind the fascia into the pelvic cavity, and not unfrequently presents itself on the anterior and internal surface of the thigh, below the insertion of the psoas and iliacus muscles, having been confined in its course by the fascia covering them. At other times it does not proceed so far down, but will present itself in the loins; several cases of which have lately occurred. The matter thus secreted amounts oftentimes to an incredibly large amount, and, after the active symptoms occasioned by its first onset have subsided, produces very little irritation. A patient was admitted some time since with angular curvature affecting the dorsal vertebrae, in a girl aged about 5 years, whose general health was at that time very good. She remained in the house about three or four months, and was during that time kept in the horizontal position, with a support to the back, which prevented any motion taking place in the spinal column. The child continued in good health and spirits, and the projection was certainly less acute. I ordered that she should be placed on an inclined plane during the day, with a view of diminishing the angle so far as the compressed intervertebral substance would admit of, immediately above and below the angle. This was accordingly done. On the third day the nurse drew my attention to a general enlargement of the left thigh. I examined it, and believed that I could distinguish a sense of fluctuation. There was no pain occasioned by the examination, neither had the child complained previously. On the fourth day the thigh was inflamed throughout its entire extent, and the cellular tissue became somewhat indurated. Several gentlemen saw the patient, some agreeing with me in opinion of there being matter, others differing, regarding it as inflammation of cellular tissue alone. I then ordered fomentations, poultices, and bandages, and in a week the redness subsided, but not the swelling of the thigh. In about a month afterwards a projection was noticed in the situation of the left loin, which continued to increase, and at once proved that the cause of the swelling was the existence of a lumbar abscess, and which had been forming for some time previous to her admission; for from the time of her entering the hospital up

to this period her health had been uninterruptedly good. The collection of matter had, however, slowly increased, and was first indicated by the change from the horizontal to the inclined position, the matter gravitating down, and appearing in the thigh. After the horizontal position was resumed the swelling in the thigh diminished, and the abscess pointed in the lumbar region.

Another case similar to the above occurred a short time since. A child, about 4 years old, had been attending as an out-patient for some months, and appeared to improve in health and strength. She was wearing a support, which I shall presently shew to you, and got about without any apparent inconvenience. However, on one occasion, her mother stated that the instrument had made her back swell. Upon examination I found a projection in the loin, indicating the existence of a lumbar abscess; so that it appears that after the active symptoms have subsided, the collection of matter still goes on, the evidence of which we are totally at a loss to discover, until it presents itself in one or other of the situations mentioned; and, as in the cases just now related, apparent improvement may continue for months with this serious addition to the original disease. You cannot, therefore, be too cautious in expressing an opinion upon these cases.

In some instances paralysis of both lower extremities will be found to coexist: this circumstance is not occasioned by the curvature of the spine, for in the most severe curvature that can be met with the functions of the spinal marrow are not interrupted, or in any way impaired, but by pressure occasioned either by inflammation of the chord and effusion as a consequence, or by the pressure occasioned by a collection of matter, with the entire obliteration of one of the bodies of the vertebrae.

If the integrity of the canal is preserved, which it generally is, and the inflammation is not propagated to its investing membrane, no matter how acute the curvature or angle at which the spine may be, the spinal marrow adapts itself to the change of position without any interruption to its normal functions; instances of which may be found in every museum. What is the cause that first set this disease in operation? Some have assigned a specific cause, as disease of one or more of the bodies of the vertebrae; I am at a loss to imagine this, as there is nothing that I can discover specific about it; there is simply inflammation and ulceration of the bones, similar to that which is witnessed in the neighbourhood of the hip and knee-joint most commonly, at times also in the elbow and wrist-joint. In these instances a blow or fall, or some injury, has preceded the diseased action, and to which

the friends assign it. In this particular instance invariably the cause assigned is a fall or other injury, and I certainly am of opinion that it is brought into operation by some mechanical injury; although we must admit that these patients are predisposed to diseased action either constitutionally, or from general and excessive debility. There is rarely any activity evinced in the most severe cases from the commencement to the termination of the disease, which arises from a general want of power, and the consequent inability that exists for the restorative efforts either to put a stop to or to control the diseased action, until an improvement has taken place in the general health, which improvement it is at times difficult to bring about; and it must be borne in mind that a slight and almost imperceptible injury is sufficient to set up diseased action, in whatever part it may happen to be applied. There does not appear, therefore, to be the capability of resisting diseased action, provided that the part or parts are subjected to the slightest interruption in the performance of their functions. These patients, however, present oftentimes the appearances of health, and upon inquiry their relatives will inform you not only that they were in good health, but that they had not suffered previously. This is no proof against the supposition that there is a predisposition to disease, inasmuch as a state of apparent health is unfortunately consistent with the existence of mortal disease—as is witnessed in cancer, and other malignant affections.

Treatment.—From what I have said you will perceive that the treatment of this disease resolves itself into general, local, and mechanical. As the constitution or general health is in all cases at fault, every means must be had recourse to which has for its object the improvement of the health of the patient, and it must be evident that tonics, attention to the diet, as well as to the secretions generally, will require the greatest perseverance, and also that *absolute* rest is indispensable.

The first thing to which you must direct your attention is that, of preventing any motion taking place in the spinal column beyond that which is almost unavoidable, and the most effectual means of accomplishing this object is to place the child either on its back or face, in the horizontal or inclined position, or both—the plan adopted by the late Dr. Verrall (the inclined position on the face). On no consideration ought the patients to be allowed to place themselves in such a position that the weight of the upper portion of the body shall press, and therefore irritate the existing disease: during the active stage, as well as during the first efforts of restoration, this point must be made a *sine qua non*, for without it all other means are of necessity

abortive: no one would for a moment allow any mechanical irritant to press upon an external wound, neither is any one to be found who would justify such a proceeding, or scarcely believe it if they saw it; and yet this disease, which is placed in a similar circumstance from its seat and nature, is but too often subjected to the constant irritation, from want of proper attention to this point, and also might be added, to the serious mischief and consequences which so often result as a sequel to this affection.

The plan I usually adopt is the following: to request that the parents should obtain a board somewhat wider and longer than the patient; let a horse-hair mattress be placed upon it, and let two circular holes be made in it at the point corresponding with the axilla, in which can be inserted a couple of plugs (one for each side), when the patient is in the inclined position, to prevent them from slipping down. With this simple contrivance, which is within the reach of all, from the facility of obtaining it, a child may be kept at rest, the disease protected from pressure, and the angle relieved, or, at all events, any increase of it effectually prevented; whilst at the same time it is the greatest possible source of comfort to the patient, who, instead of becoming fretful and irritable, with the health suffering as a consequence, as might be anticipated from the confinement, actually improve in health, and are most completely relieved from pain.

The restorative process in disease of the bones, is, as I had occasion to remark when speaking of disease of the knee-joint, always slow from its very nature; therefore their treatment must be continued for some months; otherwise, whatever improvement may have taken place, the parts become easily irritated from the pressure occasioned by the erect posture: a relapse with increased mischief follows.

Counter-irritation was used with success by the late Mr. Pott, and its advantages have since been proved by the test of experience. I have found *mild* counter-irritation answer every purpose, without the risk of interfering with the child's health, or of adding to the irritation from which they already suffer; and the form I usually adopt is that of an ointment compounded of equal parts of the Emplastrum Lyttæ and Unguentum Hydrargyri, directing the attendant to rub the part on each side of the projection and above and below it, then to apply a soft linseed-meal poultice; this is generally followed by an eruption and redness without destroying the cuticle. I then direct that they should allow this irritation to subside before a fresh application is made, continuing, however, the use of the poultice, which very frequently keeps up sufficient irritation of itself: as soon as the irritation on the

surface has subsided, or nearly so, let the ointment be reapplied, and a similar course pursued as long as there is any evidence of active disease existing.

As this disease is essentially one of debility, or connected with it, the diet must be nourishing and slightly stimulant. Some object to stimulants; I have found them decidedly useful at times in giving tone to the stomach; especially where the appetite is bad and there is great depression, small quantities of port wine, or beer, are of great assistance. As it regards the tonic, that must be left to the discretion and experience of each individual; I prefer, as I have often stated to you, the preparations of iron. The bowels must of course be regulated, and if it becomes necessary to use aperients, let them be of the mildest form, merely to produce the effect without irritating or exhausting the patient: castor oil is as good a means as any, and one which I recommend to be given when necessary. Occasionally, when there is great constitutional irritation during the formation of matter, you will do well to allay it by an opiate at night, which can be given in conjunction with the Hydrargyri c. creta; and, should the bowels be relaxed, the Mistura Creta, with the Aromatic Confection, and a small quantity of the Tinct. of Opium, should be administered regularly until it is stopped: if, however, the general health is good, the appetite natural, I should not advise any interference, merely strict attention to the position. When paralysis of the lower extremities has come on, I have found it necessary to increase the local irritation, and to administer mercury in the form of the Hyd. c. Creta, regularly, and in some instances with success. Even in these cases a nourishing diet must still be continued, and the strength of the patient supported in every possible way. A patient is at this time attending whose lower extremities were completely paralysed—not a trace of motion could be discovered: by these means he is gradually recovering the lost power, which first returned in the muscles of the toes, then the feet and knees. The amount of power is still slight, but it is evidently increasing. I believe I have noticed the principal points in connection with this affection, and I shall now return to the deformity resulting from it, and existing after the subsidence of the diseased action, namely,

Angular curvature.—From the cause of this deformity, it must be evident that our efforts can only be directed to relieve, not to remove, this deformity, inasmuch as when once a loss of substance has taken place in the bodies of the vertebrae, it is not reproduced, at least in a very imperfect degree; therefore, to straighten the spine, which undoubtedly, in young subjects, could be done, would be to adopt a mode of practice

unscientific, and fit only to be pursued by charlatans and quacks, who have neither character or reputation at stake. If the deformity is very slight, and you have an opportunity of treating it immediately following, or very shortly after, the subsidence of the disease, you can effectually put a stop to any increase which must otherwise occur from the gradual compression of the intervertebral substance above and below the angle, by doing which it becomes of little moment, and, when cured, of no inconvenience, to the patient. If, on the contrary, the deformity is to any extent, and the patient young, the relief that can be *prudently* obtained is that only which is occasioned by the compressed intervertebral substance: this, at times, is of some amount, and, upon its being removed, reduces considerably the appearance of the deformity. The mechanical means I have adopted are similar to those which have been in use from time immemorial, namely, a support to the upper extremities, consisting of a band which encircles the pelvis, having attached two crutches, one on each side, to support the shoulders, the crutches consisting of a male and female screw, which enables me to increase their length, provided relief is obtained, as the child grows—*Vide* fig. 1. I then direct that a broad flannel band should be passed round the crutch on one or other side, and over the projecting vertebra, then round the opposite crutch back again to the commencement of the band, and there united: by this means an effectual support is given without encircling the abdomen. Of course this applies to curvature existing in the dorsal or lumbar vertebrae, and not to that which exists in the cervical vertebrae. In the latter instance I have used a support similar to that represented in fig. 1, having, in addition, a part to support the head alone, so that the pressure on the anterior surface of the vertebra is effectually prevented, as in this instrument [showing it]. The use of the support must be uninterruptedly continued for years, and for the first year at least it should be worn night and day, otherwise the deformity will increase, not so much from the original seat of the affection, but from compression kept up in the intervertebral substance. In older cases, where the deformity is severe, and the loss of substance considerable, no benefit can be expected from any treatment beyond that which is connected with the feelings of the patient. Where there is a great weakness, and inability to take much exercise without fatigue, a support similar to that represented is frequently of the greatest comfort and assistance; but recollect that it must be used only as a support, and not with a view of extending the spine forcibly. In fact, in all cases of this kind, this principle must be

FIG. 1.

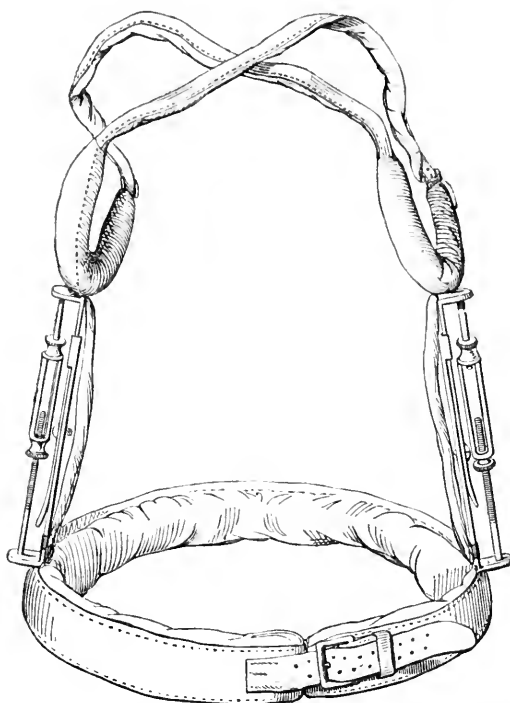


Diagram of an Instrument for the relief of angular curvature, the description of which is given at page 916.

adopted, as force or violence of any kind can lead only to results which would be regretted. A case of a young man occurred, some time since, in the hands of the spinal empirics—alike ignorant of the cause as well as of the effect, at least it is charitable to think so—in whom violent force was had recourse to, with the removal of the deformity certainly, but at the cost of the sudden death of the patient as a consequence. Violence or brutal force, such as was used towards this unfortunate patient, cannot be too strongly deprecated.

APPENDIX TO THE ESSAY
ON
DISEASES OF THE NERVOUS
SYSTEM :

CONTAINING NOTES OF THE LECTURES OF
THE LATE PROFESSOR GREGORY,
OF EDINBURGH.

BY EDWARD BLACKMORE, M.D. Edinb. •
Member Extraordinary of the Royal Medical
Society of Edinburgh, and Physician to
the Bath Penitentiary.

[Continued from page 839.]

*The Cure of Apoplexia Hydrocephulica,
or Acute Hydrocephalus.*

You lessen the flow of blood to the head by bleeding. Some bleed largely; I bleed according to the age and strength of the patients,—*e. g.* to sixteen ounces, and repeat it according to the effect. Local bleeding is good;

the best thing is to open the temporal artery. Opening the jugular vein is not to be generally used; it is just as well to bleed in the vein of the arm as of the neck. Bleeding, general or local, is most to be relied on; yet it is little to be relied on.

Blistering the head or neck is useful; from sympathy between the external and internal parts, a blister on the head may relieve the inflammation within; it is a good subsidiary remedy. If there is much of a febrile state, bleed first, then blister. Some years ago physicians would not blister in inflammatory cases.

An issue or seton is a good preventive remedy; not of much avail as a curative measure.

Purging is good. The medicine must be strong, because the bowels are torpid. Moderate doses are to be repeated until the effect is obtained, as ten grains of jalap with three of calomel, every three hours; or senna with rhubarb and salts. Children bear purging better than adults. A young child took, in nine days, 351 grains of calomel,—on some days 60 grains a day; and 198 grains of jalap in six days. The effect was very gentle; there was no purging by calomel at the time. The symptoms were headache, vomiting, and stupor. She recovered, although the torpor of the bowels might seem to indicate a fatal event. You had better try more moderate doses of purgatives.

Some like the sweating plan,—the vapour bath, and fomentations by flannels wrung out of warm water. Some give ten grains of Dover's powder; it is not generally successful.

Some recommend exciting a flow of urine by means of digitalis; it is a powerful sedative of the vascular system; it makes the pulse very slow; sometimes it is used for weeks without our seeing any effects from it. Diuretics are very precarious in their action.

Hydrargyrum is much used, and much slandered; we are disappointed in it in this disease. It is a powerful depleting remedy, and is used also as an aperient, and to enter the system, salivation being thought to be of service, by altering the determination of blood to the brain; which is a mode of reasoning I cannot approve of. It promotes absorption vastly in dropsy;

there is no remedy equal to it for this purpose. We sometimes are unable to cause absorption of the water without it. In a case of ascites I began with it, rubbing it on the belly; salivation came on with violence, so that I was obliged to keep the patient alive with nourishment. The swelling of the belly went off, and he remained well for some time. The mercury alone carried off the water. In another case of dropsy of the belly, from taking cold water, I gave Hydrargyrum cum Scilla; it occasioned a great flow of urine, and removed the swelling. He then left off the squills, and the symptoms returned. He resumed it without mercury; no absorption was produced. He then took mercury, and the dropsy was again carried off. He continued the squills, and was well for many years. I do not remember a case of a flow of urine from diuretics in dropsy without relief of the disease. Sometimes I have seen so great a flow of urine, that I have feared the patient would suffer from the relaxation; yet the discharge has been kept up to sixteen pounds a day, without their suffering from it. Hydrargyrum is not so powerful in the effusion of serum into the ventricles of the brain as in dropsical affections; yet it might be useful in the advanced stages of hydrocephalus. It is very precarious in its operation on the salivary glands. Young children are not easily salivated; one was salivated without the least benefit, who had the disease after tinea capitis. You may give three grains of calomel every six hours, or rub the stronger ointment on the legs, arms, breast.

Errhines are given because there is a want of secretion of mucus in the nostrils; the nose is dry. They are useless.

In chronic hydrocephalus the head has been punctured. In one case the water was evacuated, but it gathered again.

On the Treatment of Epilepsy.

In the prognosis of epilepsy, you attend to the original stamina of the constitution, and to the habits of the patient; for people who lead sedentary lives, and who are intemperate, are more liable to the disease, and to its recurrence.

I only know a dozen cases that ever permanently yielded to the treatment

I employed: all the means recommended are often useless. It is apt to occasion destruction of the mental powers, and to pass into mania. We can no more alter the original constitution than we can alter the complexion, the stature, or the sex. Never promise much; the patients try various remedies and physicians, to no purpose. In some cases there is a confirmed headache, giddiness, and dimness of sight, leading you to suspect organic disease; in others there is no organic affection, but the return of the disease is influenced by habit. A motion once produced in the animal economy tends to recur, as is seen in intermittent fever, in which the hour of the fit supervening can be foretold; so also the flow of blood to the head is regulated by habit. Topical plethora will take place in the head from habit, when general plethora has been removed. The disease is certainly brought on by a sudden rush of blood to the head, when there is no general plethora; this is an imperfect theory, but it admits of very successful application to practice.

There are intervals of years in the recurrence of the fits, yet the disease is not eradicated; it has occurred after a long interval. It is thought likely to cease at puberty when it has begun early; but in many cases no change occurs then.

I do not set down every case that is cured to the remedy employed. In some cases, however, on removing plethora, the disease has been abated or altogether removed; and on the patient's returning to former intemperate habits, or becoming plethoric, the disease has returned. A case of a gentleman who had fever in the West Indies, and after that the piles. The piles were stopped, and epilepsy was induced. I tried for him a cool spare diet, and open bowels, and the fits ceased for months. He then departed from his strict regimen, and the fits returned with severity, and he got into a state of idiotism.

You enjoin a cool spare diet; no other fermented liquor than small beer is to be allowed; distilled spirits and all fat meats are to be strictly forbidden; animal food is to be used sparingly. The patient should live on milk and vegetables, and you must limit the quantity to be taken. Remember the case of the miller, who

lived on curdled milk and flour (mentioned under apoplexy.)

In early cases I bleed; and in other cases, if the fit has been preceded by general or local fulness of blood, as is shewn by redness of the face, vertigo, and a ringing in the ears, I bleed from the arm; yet some say it relaxes the body and increases plethora.

In chronic cases I trust to purging, with sulphate of magnesia, and aloes with colocynth, which is my favourite.

The use of blisters in succession will prevent the turgescence of the brain. A seton or an issue is thought better by many practitioners.

Passions of the mind are to be avoided; and the exciting causes peculiar to the particular case.

Exposure to heat must also be avoided, as sitting near a fire, and in crowded rooms; and sleeping under a heap of bed-clothes: this sort of heat is a bad stimulus to the body. The patient must not sleep on a soft bed, but on a mattress, with a hair pillow: I order this as regularly as a purge in head cases. The fits recur in sleep, from the heat, and the posture, and something more: people going to bed in health are seized with a fit; and in them the subsequent attacks are common in sleep. A lady, subject to the disease in her sleep, got up before the time of its coming on, and walked in the garden, and escaped the fit; this means is worth a trial. In another case of convulsions in sleep, a large opiate at bed-time was successful.

The threatening of the fit has also been stopped by assafoetida and sulphuric ether, and by slight causes acting on the nervous system, as sneezing, and by making a patient start, and by rousing his attention; so also hysteria has been prevented by merely talking of the cold bath.

In some cases, where the fit has been preceded by a deprivation of touch, named *aura epileptica*, which is thought to arise from a local disease of the nerves, whence the irritation is propagated to the brain, the nerve has been divided, and the aura has ceased for a time; but it came back. Do not destroy the part from which the aura proceeds, for it does not always follow the course of the nerve, and it arises from a morbid state of the brain itself.

For the convulsions in small pox, a cool diet and opium is best; for the

irritation of teething, you scarify the gums; for the disorder in the alimentary canal in children, give alkalies, absorbents, and a purge of calomel; for epilepsy from worms, the carbonate of iron has done good. I rely more on purges than on anthelmintics. *Pulvis stanni* is given for the destruction of worms; and if there is arsenic in it, as there is sometimes, it would be fatal to the patient. I have given an ounce of tin filings thrice a day, without a sensible operation, but a feeling of weight in the stomach was induced; and at other times I have seen yards of the tænia come away, loaded with the tin powder.

2. Epilepsy does also take place where there is inanition. You would not try evacuations and low diet then, but give cool nutritious diet, animal food, and a little wine. A patient subject to asthma, was cured by abstemious diet; he then got epilepsy, and the pulse was scarcely perceptible before the fit came on. It was a case of inanition from the means used for the cure of the asthma. I gave him a solid diet, with slight stimulants and claret; and he took an emetic, and *Infusum Armoracæ* and *Pilulam Aloes cum Myrrha*, twice a week. The fits became less frequent, and more moderate; he did not always lose his senses, nor fall down; they then ceased entirely. Here you see the effect of different treatment in different kinds of convulsion.

We have no specific tonics for epilepsy; but—1. Exercise will increase the strength, promote the appetite and digestion, and a proper deposition of nutritious matter; it must be within the limit of fatiguing. The action of the muscles of the arms is promoted by dumb-bells. 2. Cool fresh air, the shower bath, and the cold bath strengthen; I should plunge in head foremost, and come out immediately. Washing the head with cold water thrice a day is good; I never knew it do harm. 3. A long sea-voyage has cured the habit that occasioned the disease. 4. Superstitious remedies, influencing the mind with awe and reverence, have cured it; as eating the sacred birds among the Romans; and the *viscus quercinus*, mistletoe,—the oak being an object of great veneration in the time of the Druids. 5. Bitters are employed; they do possess efficacy,

as is seen in intermittent fevers; but cinchona is scarcely ever successful in epilepsy.

Iron in any quantity or form is not successful; it is thought a tonic. I have used half a drachm of the precipitated carbonate with valerian, without bad effects; when given freely it has carried off worms, and so has done good. Tonics are not to be trusted to.

Arsenic has been given; it was thought a tonic by Cullen; it is not so. It stops ague; how it operates I know not. Is it by strengthening the body? that can be done better by a full diet and exercise. *Argentum nitratum* is thought a tonic, and a cure for this disease; how it is thought so I know not. I have tried a quarter of a grain in a pill without success; it must be taken with caution. One patient came to take a grain and a half daily; then a violent diarrhœa came on, the effect of the acrid stuff that was swallowed; the fits were suspended for six months; yet there was organic disease in this case, which led to a subsequent loss of the mental faculties. The *cuprum ammoniatum* is praised; a large dose has induced violent vomiting and purging. *Oxydum zinci* produces no effect; *sulphas zinci* is a better astringent: I know not that it is good in this disease. *Hydrargyrum*, particularly calomel, purges, and does some good. In the cure of this disease no one remedy, nor all of them together, can be relied on.

The fœtids are thought to be antispasmodic, as valerian, assafœtida, musk, castor, camphor. I knew a dose of musk, fifteen grains, stop a fit of asthma; the patient was tranquil in two minutes. It is safe; you may try it. One patient took valerian, and the fits ceased; it was omitted, and they returned; it was given again with the same success. Dr. Fothergill thought these medicines acted, in epilepsy, by disordering the stomach and impairing the appetite. He was a man of genius and observation. I give some credit to his theory.

Opium may do good in some cases of this disease; it is tried with success in asthma, which is a violent spasmodic disorder, and in hysteria.

On Tetanus.

The robust are most liable to the disease. Warm climates dispose to it;

it is more common in the south of Europe than in Scotland.

1. It is induced by exposure to cold. A person in health going to bed with the window open, is liable to be seized with tonic spasms; so if the wind changes to the north-west, when it becomes very cold. One got drunk, lay down in his garden, was exposed to cold and wet; a stiffness in his jaw came on, which was thought to be rheumatism. It proved to be tonic spasm, and was fatal in three days. It is thought to be endemic among the mountains in children, and is named *trismus nascentium*. I have no faith in its being endemic. Some thought it was from retention of the meconium; others that it was from lesion of a nerve in cutting the navel-string; for when care was taken to purge off the meconium, and when the string was cut more carefully, and the part dressed with oleum terebinthinæ, the disease was prevented.

2. Tonic spasms are induced also by irritation in the stomach and bowels in adults, as is seen in cholera. A patient also, in the course of recovery from an intermittent in the West Indies, got tonic spasm bending the body forwards, from eating too much, and a pine apple, at dinner.

3. Tetanus sometimes occurs after great operations, and also after a slight scratch. In one case, where the face was burnt with a squib, in a few days the patient got tonic spasm, which began in the side of the face that was burnt. If a wound of this sort does not inflame and suppurate, it is thought a sign of tonic spasm coming on; sometimes, however, it has not begun until the wound was healed. In the West Indies, negroes are more liable to the disease from this cause than whites. A negro cut his thumb with a broken china-dish; in a quarter of an hour the jaw became stiff, and in half an hour he was dead. After Admiral Rodney's battle in 1782, of 810 wounded, 88 died in three months; 17 of these died in tetanus.

It is a most dangerous disease; and that from a wound is most so. The diaphragm is affected in it. A person had it from a slight burn in his face; for two days he was better by the cold affusion, and large doses of opium; but it recurred, and was fatal. If a cure is obtained, it is never sudden; the re-

medies must be continued, and urged strongly. Cullen says, if it arise from lesion of a nerve, you are to cut off the communication of the part with the sensorium. The division of the nerve has been tried without success. In a case from a blow on the nose, I cut down to the bone without success. The amputation of the wounded limb has been successful. Caustic applied to the wound, so as to bring on inflammation, has been also successful. In one case I tried it, and could not make inflammation. Oleum terebinthinæ has been poured into the wound, severe pain was excited, and the symptoms abated. It is worth a trial. Some apply opium to the wound to prevent the disease.

The cold affusion has been successful in the tetanus from a wound. I have seen the symptoms alleviated for a time by it, where I poured cold water on the wounded thumb.

In the other varieties of the disease, some give calomel to ptyalism. Opium is the most successful remedy; give it in large doses, but not so as to endanger life. You must give larger doses than in any other disease; give it until drowsiness, or relief of spasm, is produced. One patient took fifteen hundred grains in seventeen days. Ten times the usual dose has been often given, with no stupor, no delirium, consequent. Give five grains of the extract, or, what is better, a drachm of the tincture, every hour, or every two or three hours. Opium in clysters is not so useful as when taken into the stomach. You must use your remedies by the mouth quickly, as the power of swallowing is lost in a few days. Some apply opium to the muscles first affected with spasm; it might be of use. I would not trust to it. You may moisten the plaster with the tincture, and apply it.

The bowels partake of the tonic spasm, and opium increases the costiveness. You must relieve it by the milder purges, as by castor oil, aloes, and senna.

I have little faith in fœtid antispasmodics; but as they are strongly recommended, it is a moral duty to give them a trial. Musk is safe; castor and camphor are little to be relied on; and petroleum likewise. Cinchona is recommended; three ounces have been taken in a day, in a quart of Madeira

wine. Warm bathing, fomentations, and unctuous applications, have been tried. The cold affusion has had a good effect. See Dr. Wright's cases in the London Medical Observations. Strip the patient; pour cold water over him; wipe him dry; lay him in bed; then give a large opiate. The spasms subside, and recur in a few hours; then repeat the cold water. It is a most powerful remedy. Hippocrates mentions it; but it is not noticed by Celsus or Aretæus.

On Chorea.

1. It is connected with the state of the gums sometimes, at the second dentition; you should examine the state of the mouth. In one case the young teeth were cut down upon, and the chorea ceased. In another case the teeth were drawn, and he got well; it returned, however, without any affection of the mouth. I then tried the cold bath and tonics, and he got perfectly well. It sometimes ceases spontaneously at the second dentition. It commonly ceases at the age of puberty. We see little of it in adults; yet it will sometimes continue for the whole of life.

2. It arises also from the state of the bowels. See Dr. Hamilton on purgatives. It is not the particular medicine taken, but the evacuation that does the good. We are not always successful by this plan. Some get well by the use of the cold bath; in others it has not succeeded. It is safe practice with a tonic regimen, as good diet and exercise.

In convulsions with dry gangrene, from bad diet, and old age, evacuations with opiates are the remedies.

On Hysteria.

The sensation of a ball rolling to the throat is thought decisive of a case being hysterical; yet hysteria occurs without it. The convulsions are sometimes like those of epilepsy, and you are obliged to tie the patients down to the bed, or to put on the strait waistcoat. There is great weakness of the mind, with laughing and crying. There is generally some moral cause leading to it; a little emotion of the mind will bring on immoderate laughter or weeping alternately; in one case a most violent tremor came on. It is contagious: a lady, on falling down

stairs, fell into a fit of laughter and crying; the maid servant also fell into laughing, crying, convulsions, and profound sopor. Dr. Cullen thought it might occur in men; but genuine hysteria belongs entirely to the female. It is thought to be from sympathy with the uterus; it rarely occurs before puberty, and it is seen after the cessation of the menstrua. I have seen hysterical symptoms after the age of 60, but it is rare.

An asthmatic paroxysm may occur as a symptom in hysteria.

Various diseases are connected with it, as—1. Amenorrhœa, emansionis et suppressionis. I have often seen it a few days after a stoppage of the menses. The first symptoms were febrile, pains of the head and back, with hardness of the pulse, marking an irregular distribution of the blood; and then followed hysterical symptoms.

2. It is also connected with menorrhagia and loss of blood, where there has been no plethora. You may observe great irritation in the nervous system from bleeding. Epilepsy has been brought on by a sudden depletion of the vascular system; the great debility from this cause may occasion hysteria.

3. Disorder of the stomach and bowels, which is attended with headache, named "clavis hystericus." The chief seat of the disease is the alimentary canal; it is commonly connected with obstruction in the bowels, and with dyspepsia. The globus hystericus seems to be from spasms in the canal; the patient obtains relief from a discharge of flatus from the stomach.

4. Some suppose a connection between hysteria and lasciviousness; this cannot be common, for the disease is brought on by anger, terror, pain, grief, which must preclude lasciviousness. Never give a hint of such a kind in your practice. If the patient is unmarried, you may say, "There is no danger, no objection to her changing her state."

Hysteria is our opprobrium, like other nervous affections. It is difficult to cure, and is apt to recur; it is not to be cured by medicines alone. It is aggravated by improper regimen, and by inactivity of the mind. The patients are apt to give way to it; they might arrest the tendency to it by an effort of the will. You urge them not to give

way to it, by awe or terror, as by a rod well applied, or by threatening them with disagreeable remedies. The terror of the shower-bath has kept off the fits. Thus we break the habit of the disease. Cullen directed bleeding too freely. If you meet with a young hysterical patient, I would have you try bleeding, but not often, nor indiscriminately; if they live fully, and take little exercise, you should regulate the diet; enforce low living, and exercise in the open air; regulate also the costive state of the bowels by calomel and jalap, and clysters of decoction of senna. I would rather trust to Dr. Hamilton's purgative plan than to other medicines. Some physicians give wine, and resort to a free use of opium; the patients get worse and worse from such treatment. In one case, in which the practitioner said, "Ply her well with port and laudanum," the patient was brought to imbecility, and almost to mental derangement. Ether, which is a strong brandy, may counteract the tendency to spasms; yet the transient relief is too dearly purchased. Fœtids, as assa-fœtida and valerian, are used from their sensible qualities, and a curious notion respecting the uterus. Burnt feathers used to be held to the nostrils; it often affected the nervous system. Tonics have been given, to lessen the irritability of the constitution. All tonic drugs are ineffectual. I trust to well-managed diet and exercise, cold bathing and the shower-bath, and being much in the open air; this strengthens, and lessens irritability. One patient, who was thought unable to sit on horse-back, was put on a horse while in hysterics. I said, "You may fall off if you please; but you shall ride;" and she was much benefited.

Occupying the mind is good; more women get hysteria by keeping in a hospital than are cured there.

In a case of hysterical spasm in the throat, I tried electricity with advantage.

[To be continued.]

RECORD OF CASES.

By THOMAS MAYO, M.D. F.R.S.

Physician to the Infirmary of St. Marylebone.

(For the *London Medical Gazette*.)

[Continued from p. 487.]

At the commencement of this record of cases I have pointed out an expediency

which attaches to such records, apart from any value that they may claim from novelty of communications;—namely, as supplying, or rather contributing to, the great stock of materials from which every day's practice is drawn. Nosological descriptions supply, indeed, the points essential to the type of each disease, and would be illogical if they travelled into non-essential matter. They are, in fact, diagrams, and, as such, perform a function on the importance of which I need not expatiate: no one can safely advance into practice, or even use his own experience, without risk, unless thus instructed. But, after all, it is from individualised cases of his own, or others, that he immediately obtains those analogies from which he must act at the bed-side; and that man *cateris paribus* is the best practitioner, who, having been enlightened by a just nosology, can bring to bear the largest number of remembered facts. Hence the value of a record of cases; about the novelty of which, by the way, we need not be anxious, if we give them honestly, for no two cases ever were alike.

Lady H., aged 54, of a full and flaccid person, long subject to hysterical affections, was attacked by rigors, soreness of throat, and extreme general uneasiness, on the 7th of February, 1841. She had been attended by a judicious general practitioner to the 10th, on the evening of which day I saw her with him at nine.

The pulse and temperature of the skin were low; the tongue dry and brown; the tonsils of a purplish hue, slightly enlarged, with some coagulable lymph on their surfaces; the face pallid and sunken. I observed a slight redness on the arms and chest—so slight that it seems never before to have attracted attention; still its character appeared to both of us decisive on careful examination. I learnt that the bowels had been acted upon by several aperient doses, and that eight grains of calomel had been given. If we had not possessed evidence of the presence of scarlatina, we should still at that period have considered the patient in great danger. Her consciousness, I should observe, was then unimpaired; but I understood that during each night she had been occasionally delirious. Sinapisms were directed by us, the decoction of cinchona, with the sesquicar-

bonate of ammonia, and other cordials, freely given during the night, and at an early period of the morning we had the advantage of Dr. Latham's advice in favour of this system. But the patient sunk rapidly, and the case terminated by half-past 12 P.M.; not the slightest reaction having taken place.

No autopsy was permitted.

On the 21st of March, more than five weeks after this event, in the same house, a son of Lady H., a fine, well-grown florid boy, aged 7, having been up to that day in his ordinary state of good health, was attacked, towards the evening, with rigors, vomiting, and feverishness. He was seen by a general practitioner the next day, who gave him, at 3 o'clock, P.M.—

Hydrarg. Chlorid. grs. ij. ; Pulv. Jacobi, grs. iij. ; and at 5 P.M. a solution of Magnesæ Sulphas in Infus. Sennæ Co.

About this time I saw him. His pulse was 110; his tongue dirty; his face flushed; his head aching, and his forehead heavy. The bowels, I learnt, had not been relieved the previous day; a clayey motion occurred while I was in the house. The character of his then symptoms was that of common bilious obstruction, with constipation and pyrexia, except that there was fulness and redness of tonsils, with coagulable lymph on portions of them.

At 8 o'clock, P.M. I saw the patient again with the general practitioner. The flush of the face had then subsided; the head, according to the little patient, was comfortable; some appearance of ulceration of the tonsils, and a few small spots on the chest, but nothing either there or on the face amounting to incipient scarlatina. The bowels had acted three times, and in the latter motion there was good bile. The pulse was quick, less full; heat of skin correct. The mind was disposed to wander.

Emplast. Lyttæ applicetur Nuchæ.

R. Mist. Camph. ʒi. ; Potassæ Bicarb. grs. x. ; Ammoniacæ Sesquicarb. grs. v. ; ex Suc. Limon. coch. parv. iij. 4tis. horis.

22d, 10 A.M.—Very incoherent during the past night. Motions had passed unnoticed by him, though awake at the time; and though the blister has risen, he lies upon it without any complaint of it. No eruption; throat more ulcerated; urine plentiful.

Perstet. Let strong beef-tea be given freely.

Half-past 5, P.M.—Urine and motions pass unnoticed, but in moderate quantities. His mind wanders continually; some pale distinct spots on the chest. The tongue, which had been dry and brownish in the morning, is moister; tenacious mucus hangs about the fauces. The pulse is soft and regular, not weak; 130 in number. Carotid action, which had been considerable in the morning, is diminished. He now refuses medicine, and rejects the broth from his stomach mixed with green bile.

At about 7 o'clock P.M. he became cold and pallid, and his inspirations frequent and hurried. By 11 o'clock on the same night he was dead.

Applying my ear to his chest, about half an hour before this event, I found the respiration perfectly vesicular, and the action of the heart normal, though very frequent.

Post-mortem.—Sinuses of the brain very turgid with blood; effusion of serum between pia mater and tunica arachnoidea; pia mater gorged with blood in every part; numerous bloody points observed in cutting through the substance of the brain, which was of normal consistency; left ventricle very full of fluid: but little in the right, which probably arose from the depending position of the left side while under examination.

Viscera of abdomen and thorax normal, except an effusion of about half an ounce in the pericardium, and some concentric hypertrophy of the left ventricle.

These two formidable cases were fatal with all the rapidity of an intense morbid poison. In that of Lady H. the fatal tendency of the disorder was manifest for at least sixteen hours before death. But it is a remarkable fact, that a practitioner, whose name would be a sufficient guarantee of his experience and talent, saw the little boy not more than three hours before his death, (being accidentally called in through the anxiety of the parent), and gave then a decidedly favourable prognosis of that case.

After the death of Lady H., ample means were taken, by cleaning, and chloride of lime, and removal of linen, to purify the house, itself airy, and situated near Hyde Park. The child staid in the house with the rest of the

family, and sickened on the 38th day from his mother's death.

The progress of these two cases is unsatisfactory in respect to treatment. One point certainly deserves notice, that very active measures were in each case taken to relieve the disorder by operating on the *primæ viæ*. Did these measures lessen or improve the chance of the exanthema coming forward?

This activity of purgation was carried out more strongly in the case of the mother than of the son, and her prostration of strength was extreme. Yet the duration of the latter case was even shorter than that of the first.

[To be continued.]

ACCIDENT

TO THE

SHOULDER-JOINT,

ATTENDED WITH SOME PECULIARITY OF SYMPTOMS OF RARE OCCURRENCE.

To the Editor of the Medical Gazette.

SIR,

THE following cases*, which I have lately seen, are at your service, if you think them likely to interest your readers.—I am, sir,

Your obedient servant,
J. COLLIER, M.R.C.S.

Brackley, April 2, 1845.

Miss A., Jan. 26th, 1845, whilst crossing her bed-room in a hurry, endeavouring to save herself from falling, instantly put out the left arm at full length to hold by the bed-post.

The sudden and unexpected extension of the whole limb immediately caused the head of the humerus to slip from its proper place, leaving a slight depression below the acromion, giving the shoulder a sunken appearance. She could, by moving the arm about, herself replace it in the glenoid cavity, and as easily displace it; the act *not being attended with pain*.

This singular case was also seen by Dr. Robertson, of Northampton, a few hours after, who at that time was attending another part of the family: he expressed his astonishment at the patient's agility in oscillating the joint, never having seen or heard of a similar case. A figure-of-8 bandage was used,

the arm confined to the side, and properly supported in a sling for six weeks. The patient can now move it very well without displacing it.

There can be little doubt here that the dislocation arose from muscular action.

I have taken the liberty of transcribing the following case from the Provincial Medical Journal, as bearing some resemblance to the above.

“Richard M., æt. 31, a gamekeeper. A few days ago, whilst hunting and destroying rabbits, he pursued an unfortunate one to his burrow, which latter took a nearly horizontal course into a thick fence. Having a long arm, he conceived the possibility of reaching the animal at the extremity of its recess, and being just able to touch it with his fingers, he made a strong effort to force the arm deeper, and, as a consequence of this violent straining, the head slipped out into the axilla, and he was obliged to relinquish his grasp.”

HÆMORRHOID NEEDLE.

To the Editor of the Medical Gazette.

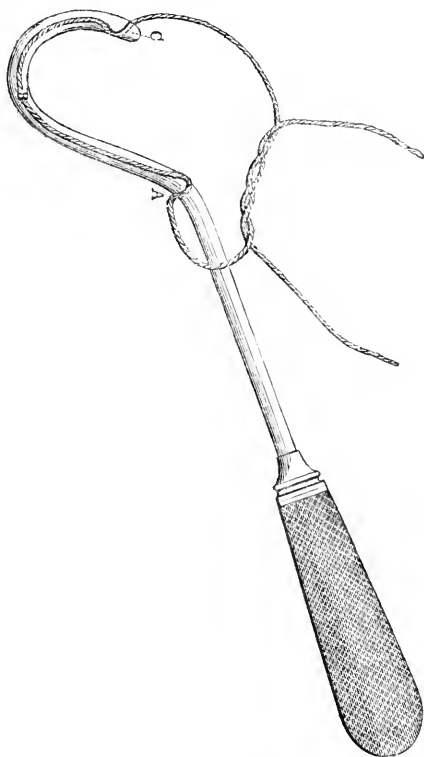
SIR,

I BEG leave to forward to you a drawing of an instrument which I have recently invented for the purpose of applying ligatures to small tumors of the vagina and of the rectum.

This instrument will be found particularly adapted for the removal of hæmorrhoids. It not unfrequently happens in these affections that considerable difficulty is experienced in getting the ligature to remain close around the base of the tumor, and sundry attempts are made ere the operator succeeds. This is peculiarly the case when the tumors are not very prominent, their bases broad, and a number of them are situated close to each other.

The ordinary mode of proceeding in such cases is to pass the ligature around the tumor, with the right and left index fingers, either aided by a tenaculum or not, as the operator may deem expedient: with the utmost precaution it sometimes occurs that our endeavours to complete the operation are embarrassed by the constant slipping of the ligature; or, what is still

* We omit the case of dislocation of the hip-joint, as we do not find in the report anything out of the ordinary way.—ED. GAZ.



View of underside of Instrument, shewing the groove for entrance and outlet of silk cord.
A, entrance for silk. B, Continuation of groove. C, Exit groove upon point of Instrument.

worse, the operation may prove unsuccessful, from the ligature embracing a portion only of the hæmorrhoid.

Such accidents are less likely to occur when the hæmorrhoid needle is resorted to, for it enables the operator with great facility to keep the silk in close contact with the base of the tumor, and when two or three are close together, and are situated high up the rectum, the ligature is readily passed between them.

As seen by the drawing, the instrument is of very simple construction, and in shape is somewhat similar to a button-hook: on its under surface is a groove for the reception of the silk, which latter must be well waxed before it is used; at each extremity is a slit or notch for the purpose of nipping the silk and retaining it in its proper situation.

The operator carries the needle, previously threaded, behind the tumor, and, with the handle slightly raised, in

order that the groove may be brought to bear upon its base, he gives it to an assistant to hold, directing him to keep a steady and firm pressure downwards and outwards: the operation is then completed in the ordinary way; the ligature as it is tied releasing itself from the groove of the needle.

A modification of the same instrument might, I think, be advantageously resorted to for the removal of polypi and other tumors of the uterus.*

Your obedient servant,

G. BARLASE CHILDS,
Surgeon to the City Police Force.

CASE OF LABOUR, COMPLICATED WITH RECTO-VAGINAL HERNIA.

By PROFESSOR MEIGS.

MRS. R., aged about 30 years, the mother of four children, all of which were born by easy natural labours, and

* The needle is made by Mr. Fergusson, of West Smithfield.

one of them in a labour of only two hours, was seized with the parturient pains at half-past eleven o'clock last night. She was at full term, and in good health, save that she had complained much of an unusual pain in the right side of the abdomen, and particularly in the right iliac region.

Her physician, Dr. Bicknell, was called to the charge of the case:—Dr. B. discovered a tumor occupying the cavity of the pelvis, which impeded the progress of the labour. The woman's pains were frequent and violent, and attended with the most excessive tenesmic effort at bearing down. Dr. B. invited me to see the patient, and I arrived at two o'clock, P.M., at her house in West Philadelphia.

The external parts were in a relaxed state. The index finger used in touching was pressed towards the symphysis pubis, by the tumor, which seemed nearly to fill up the pelvic cavity, and effectually to debar the head even from engaging in the superior strait, though the labour had continued already 14½ hours, in the case of a woman who in all other labours was occupied but two hours with the whole process.

I could just conveniently touch the presenting part of the head, which was in the 4th position of the vertex presentation. The os uteri fully dilated.

The tumor was compressible. I touched by the rectum, and so discovered that the tumour was in the peritoneal cul de sac betwixt the rectum and vagina, but distending that cul de sac enormously. The diagnosis could be nothing else, considering the softness of the swelling, than a vaginal enterocele, which I immediately proceeded to reduce.

The woman was placed on her left side. The knees drawn up. I introduced the fingers of the right hand into the passage, and pressed the ends of them against the lower part of the tumor. By keeping up the pressure a short time, during which I repeatedly exhorted the woman to be passive, and not to bear down at all, I could cause the whole mass of the swelling to rise up towards the back part of the superior strait. As the mass ascended, it grew smaller, until, on a sudden, the whole tumor slipped beyond the reach of the hand, and was lost. I announced

this good fortune to the patient, and exhorted her not to bear down at all with the approaching pain lest the gut should again prolapse. The pain that ensued brought the head nearly through the superior strait, and partially rotated the vertex. The second pain rotated the head and propelled it on the perineum; the third brought the vertex considerably beyond the pubic arch, and the fourth expelled a very large and healthy child; after which the placenta came off in a few minutes.

I look upon this as a very interesting case; not merely on account of the rareness of vaginal enterocele in the pregnant female, but as exhibiting the power of such a tumor to suspend and impede the progress of a labour in all other regards natural and healthy.

I presume, as so many hours had already elapsed in vain and exhausting efforts by a strong woman, that there was reason to fear a dangerous strangulation or contusion of the displaced bowel; and that it was fortunate for the patient that the intestine could be returned above the plane of the strait. The rapidity with which the head passed through the whole pelvis and the soft parts, as soon as the obstruction was removed, showed conclusively that the vaginal enterocele was the cause of her distress. As I have never met with such a case before, I thought that the publication of it might prove useful to some of the younger of your readers, should one of them happen to meet hereafter with a similar instance of difficulty.*

ANALYSES AND NOTICES OF BOOKS.

"L'auteur se tue à allonger ce que le lecteur se tue à abrégé."—D'ALEMBERT.

Observations on the Growth and Irregularities of Children's Teeth. By W. H. MORTIMER, Surgeon Dentist. London, 1845. 8vo. pp. 130. 2d edition.

THE object of the author in publishing this little volume, is, according to his own statement, to lay down fixed rules respecting the management of the teeth, "by which parents may judge for themselves in the absence of a competent person;" and it is also his design

* Philadelphia Medical Examiner.

that it should serve "as a guide or reference, when any doubt exists as to the capabilities of those within reach." It will therefore be inferred that the work has more of a popular than of a professional character. His intention, however, has not been to make "every person his own dentist;" but to cause parents to attend more than they are commonly in the habit of doing, to the effects of dentition on the health of the child, and to ensure by very simple precautions, the growth of a sound and regular set of teeth.

In respect to lancing the gums, the author recommends that this operation should be performed only when the tooth is so near the surface, that it is impossible for the cicatrix to reclose over it. p. 25. He seems to consider that the production of a cicatrix offers much greater obstacle to the protrusion of the teeth than the hard gum itself. He therefore considers the operation worse than useless when performed early. With regard to his reason for its non-performance, namely, the production of "a cicatrix," we remember being taught that a cicatrix was a newly formed part, and being therefore endowed with less vitality than the contiguous structures, it was more easily removed by absorption. Some dentists appear to regard these cicatrices of the gums in the same light as hard and knotted cicatrices of the skin, of twenty or thirty years' standing. The author differs in opinion from Dr. Combe respecting the time at which animal food should be given to an infant. Dr. Combe appears inclined to postpone a full animal diet until the permanent teeth have appeared. The author thinks, and most persons will agree with him, that the appearance of the first set of teeth indicates that the use of the animal food may be properly commenced.

The milk-teeth are very apt to decay, which the author ascribes to want of cleanliness, and which is no doubt a very common cause of decay in children and adults. These teeth should on no account be removed,—their removal should at any rate be delayed as long as possible; "for if extracted before the other teeth are ready to supply their places, the contour of the jaw becomes smaller, and there is not then sufficient room for all the second teeth." p. 37. He recommends that the decay, if commenced, should be arrested by

artificial means: and he is evidently looking forward to the appearance of "a Newton," in Dental Surgery (!) to explain the anomalies observed with respect to the dropping out and decay of the teeth.

Gold cannot be often used as a stopping in the milk-teeth, since they will not bear the pressure required. The author's plan is to use an amalgam composed of powdered silver five parts, and mercury one part; the surplus mercury being mechanically separated. This, according to him, is what is commonly advertised as the "mineral succedaneum." Another stopping which he recommends is a compound of five parts of bismuth, melted with three parts of tin, to which one-twentieth part of mercury is to be afterwards added. The cavity of the tooth being thoroughly dried, some pellets of this compound are dropped into it, and they may be melted into a solid mass by a blunt-pointed steel instrument heated to about 160°. p. 38. The sole object of this operation is to keep the tooth in until the jaw has had sufficient time to expand; for the early removal of one of the first set induces the speedy appearance of one of the permanent teeth, and irregularity is the consequence.

As the stopping of the tooth is intended to be only temporary, we do not see why Dr. Rolff's ingenious suggestion should not be adopted:—*i. e.* a small pellet of caoutchouc is to be softened by heating it on the end of a wire, and it may then be introduced into the previously cleaned and dried cavity of the tooth. This is said to have proved an excellent remedy for tooth-ache even in adults, and it has the advantage of being easily applied without the aid of a dentist.

The milk-teeth should not be removed until quite loose, and then in pairs, in order to preserve regularity of growth in those which follow them: but they must be at once removed, whether loose or not, when any of the second set appear, either on the inside or outside of them. Again, it is properly recommended that the adjoining teeth should not be taken out until those already removed are replaced p. 46. Inattention to this point produces great irregularity.

The following remarks are of practical importance, and may be new to some of our readers:—

"At about six, the first teeth of the second set begin to appear; they are large double-teeth, and are situated behind the last milk-teeth at each extremity of the upper and lower jaw. When these teeth are perfectly formed, they serve, being placed one over the other, as a support to the gum while all the first set are changed. * * * These teeth, from the early age at which they appear, and from want of attention to cleanliness, almost always decay in early life, and very often shortly after they have made their appearance. During the progress of dentition, no attention is paid to them, under the supposition that they are milk-teeth, and that consequently they will be changed; if therefore they decay, no notice is taken of them until they give pain, when the child is taken to the dentist to have them extracted." p. 39.

The author advises that they should be stopped so soon as caries appears, and further remarks, that "out of every hundred children that are brought to me, of more than eleven years of age, at least ninety have some of these teeth in a decayed state, and ninety-five out of one hundred adults have lost one or more of them, whereas, had they been properly attended to, they might in all probability have been saved." p. 41. We believe that there is some truth in these observations, and that many persons when young have lost their teeth through the ignorance of those whom their parents consulted. Miss Martineau's case has lately given a fresh impulse to mesmerism, and we shall probably hear further of the application of this piece of charlatantry to the operation for the extraction of teeth. Our author remarks on this subject:—

"To those experiments that have been recorded respecting the removal of teeth during the mesmeric trance, without the knowledge of the patient, and based upon the evidence of their not showing any outward sign of pain, I attach but little weight. There are too many instances on record which prove the amount of physical sufferings that the body can endure without any outward demonstration of pain, to attach much importance to such a proof (an assumption?). Until, therefore, something more clearly demonstrative is brought forward, I must incline to believe that there is not sufficient evidence to establish the fact (the alle-

gation?). And even if there were, I firmly believe that mesmerism could and would only affect the few whose nervous systems were in the morbid condition necessary to receive its influence. On the healthy and vigorous mind, it will fail to produce any of its mystic effects." p. 92.

Before mesmerism was resuscitated, as it has been within the last few years, we remember witnessing the operation for the removal of the breast in a woman, who evinced no other signs of suffering during its continuance than that of a slight tremor. It is strange that some men will now resort to such absurd hypotheses in order to explain these well-known facts.

The author rejects the Ehrenbergian notion of the tartar of the teeth consisting of minute geological deposits of animalcula, but he at the same time admits that they exist in everything!—a conclusion to which present microscopical researches appear to be daily tending.

On tooth-powders the author is vague, contenting himself with laying down rules for what ought not to be used; nevertheless, he thinks them as necessary to the proper cleansing of the teeth as soap is to the cleansing of the hands. Probably tooth-powders are required, owing to the present degenerate state of the human race; for he observes, "in all the jaws that I have ever seen of a very remote period, some more than two thousand years old, the teeth have invariably appeared healthy." p. 107. He is evidently here alluding to the jaws of the Shepherd kings—the Amenophs and Rameses of the olden time—to whom probably tooth-powders (certainly such as are now used) were unknown.

Having thus given an analysis of the contents of this little book, we cannot close our notice without pointing out what we consider to be blemishes. The style is rather too easy, and somewhat approaches that of certain American writers. Thus, at p. 78, in reference to the proposed establishment of a "Children's Dental Club," as we interpret it, the author speaks of admitting his little annual subscribers "at a low figure;" and he recommends such clubs to the public generally for "two great desiderata most sought after—security and economy." This appears to be too much like a shopkeeper's

advertisement, especially when, just before, he speaks of "the result having always proved very satisfactory (to the patient or the dentist?) as very few irregularities [of the teeth?] have occurred in such cases." Again, at p. 120, we find the following passage in reference to artificial teeth: "The best substitute, for durability and cleanliness, is undoubtedly the mineral teeth, made as I alone have been in the practice of making them." There is a sort of apology for this self-laudation in the shape of a note, which, however, does not much mend the matter, as we find by it that the original inventor communicated his process to *only two* persons, *i. e.* the author "and another, who does not make them; and although several attempts have been made to imitate his teeth, I believe they have invariably proved unsuccessful." Note, p. 120. We look upon this as a covert advertisement. We would ask the author whether every dentist does not regard his own plan as the best; and, admitting the superiority of "his mineral teeth," whether he never heard in Paris, in which city he resided for some years, of the French proverb, "*le vrai n'est pas toujours le beau*?" We regret to find these defects; for the work contains, in a small compass information whereby practitioners who do not want to go deeply into the "mysteries of dentistry," may profit. It is also illustrated by some fair drawings, executed in the new art of glyptography.

MEDICAL GAZETTE

Friday, April 18, 1845.

"Licet omnibus, licet etiam mihi, dignitatem
Artis Medicæ tueri; potestas modo veniendi in
 publicum sit, dicendi periculum non recuso."

CICERO.

ON THE PROPOSED CHANGES IN THE PROFESSION.

WE continue to receive from all parts of the country so many copies of protests, memorials, petitions, and resolutions, that even if our pages were double their present extent, we should have some difficulty in giving insertion to all of them. We elsewhere print a

memorial from the Hereford Association (p. 941), signed by a number of respectable practitioners, whose diplomas bear date from 1796 to the year 1843. A copy of a petition to the House of Commons, embodying similar resolutions, and signed by many respectable members of the College, old and young, has also reached us from Wolverhampton; if we do not give it insertion, it is that we only find in it, an iteration of grievances which have already met with a full exposition in our pages. From Liverpool we have received a copy of a memorial addressed to Sir James Graham by the medical profession of that town. We shall select from this memorial two extracts, which appear to us to contain new matter. Some objections to the proposed changes in the profession are put in a strong light, and certainly deserve mature consideration. With respect to the fellowship being given of right to the future registered "surgeons," while it is withheld from those now practising as such, we fear it will be said, from the tenor of the recent answer of the College of Surgeons to the memorial of the National Association, that the permission given to present members to register as "surgeons" must be looked upon as a favour, and as a kind of indemnification for the loss of the fellowship. We here extract the two resolutions to which we refer:—

"That your memorialists are of opinion, that the power granted to the Council of Health by clause 28 of the bill, of making regulations for specifying what form of testimonial shall be necessary to qualify the holder for appointments to public institutions, may become liable to abuse; and they therefore consider that a matter so deeply affecting the interests of the profession should be fixed by statute, or left, as at present, to the decision of parties supporting such institutions.

"That by clause 19 of the bill, 'every person registered as a physician or

surgeon under this act, shall be admitted as an associate of the Royal College of Physicians, or as a fellow of the Royal College of Surgeons, from which he shall have received his letters testimonial as physician or surgeon,' while the act makes no provision for the admission of persons at present practising as physicians or surgeons to the same privileges, your memorialists consider this a serious omission in the bill, inasmuch as persons engaged in active practice have not the opportunity of obtaining these privileges, and must necessarily, and without any fault of their own, be placed at a disadvantage by others entering the profession subsequently to the passing of this act. That the holders of surgical diplomas have especial cause of complaint, inasmuch as, on obtaining such diplomas, they were admitted to the highest position in their profession to which they could *then* attain, while the present measure provides for the advancement of all future surgeons at once to the rank of fellows, and by so doing places them in a higher position than their seniors in the profession, and that without any superior merit to entitle them to such advancement."

The Council admit in their answer (see p. 906) that "many who have not been included in the list of fellows are well known to have attained the highest eminence, and to enjoy the highest reputation as practitioners in other departments of the profession," &c. Now the real question between the College and the profession appears to us to be, whether they have not included in their lists of fellows, many persons who do not possess so high an eminence, either as surgeons or practitioners, "in other departments of the profession," as a large number who have been arbitrarily excluded. We have reason to believe that the feeling that an error has been committed in this respect does exist even among some members who have, or ought to have, influence in their counsels, and that there are among them men disposed, with conscientious motives, to do justice to the excluded. The

Council think that it is "a misconception of the nature of the qualification," to infer, as is done by so many members, that omission from the list, implies "professional degradation." We do not think that there can be two opinions on the point. They have omitted members of the College, who are neither "professional paupers," nor "persons of notoriously bad character," neither puffers" nor "vendors of nostrums," nor are they "writers of indecent advertisements," or in alliance with chemists and druggists; and, with regard to surgical attainments, and their ability to promote the science of surgery, they are quite equal, if not superior, to many who are now ranked as fellows. The College contend that there is no degradation in the omission; and yet they virtually admit, that the members must be a class degraded below the fellows, when they assign among the reasons for not adding more members to the list, that there are among them "professional paupers, persons of bad character, vendors of nostrums," &c. &c. Is there no degradation in being mixed up with a class of this description? Would not the fellows themselves feel greatly degraded, if such persons were admitted to the fellowship? And yet we are told that this feeling of degradation among the members is founded in a misconception on their part. Would it be a misconception on the part of the fellows if matters were reversed? We believe not,—and it would be better at once to acknowledge openly, what is implied inferentially, that the fellows are intended to be a select and superior class!

Our honest conviction is, that the College have been led into a serious error in the appointment of the fellows. The principles upon which they went were only apparently good, and they have been attended in many cases with great injustice. There is no doubt that

many who are now among the excluded would have been admitted had their qualifications (undoubtedly superior to those of many fellows) been known. Either from not making any claim for the fellowship, or from making the claim too late, many of the present members have been excluded; and they have, we think, reasonable cause of complaint. The College did not call upon its members to send in a claim with their qualifications, although there was ample time for a principle of this kind to have been adopted, or we believe they would have come to a very different decision with respect to many of the names. They would have found that there were some who had a far better right to have the fellowship conferred on them, than others whom they ultimately selected, and who probably by a fortunate chance found a member of the Council to speak for them. Again, it is not improbable that the qualifications of others among the excluded became a subject of discussion in the absence of those members of the Council to whom alone their qualifications could be known. In these cases injustice has been done by accident, and we verily believe that there are not a few members who can trace their exclusion and their present incorporation with "felons," "venders of nostrums," and "writers of indecent advertisements," to this cause alone.

It is very true that any principle of selection might appear invidious to those who found their names omitted; some kind of injustice would perhaps be done in all cases; but the greatest pains should be taken, in carrying out a principle of this kind, that this injustice should be of the least possible amount. The complaints of many hundreds of respectable members, and the advice and remonstrances of many of the "fellows" themselves, show that the plan adopted has not been just.

The maximum rather than the minimum of injustice has been the result. We have reason to believe that some members made no application for the fellowship, guided by the example of others, who however found themselves in the first list from an application having been directly made to them. Some again fortunately had a friend to speak for them, when their names were taken: in no other way is it possible to account for the arbitrary manner in which members have been admitted and excluded:—and yet the Council assert that "they have done what was required of them to the best of their ability, and have made the selection altogether on public grounds, without favour or prejudice, and uninfluenced by private motives"! (p. 906).

There is still a *locus penitentiæ*. The injustice may be removed without making *all* members fellows—without following that kind of seniority in the selection which necessitates an association with felons and persons of notoriously bad character; or without converting the College of Surgeons into a College of General Practitioners. The way has been pointed out by some among their own body*, and we have the strongest reason to believe that, on a request being made, the Government would not hesitate to grant a supplementary charter, in order that the College might repair a proved injustice. If they doubt whether they have acted unjustly, let them not refer to their own motives, but at once call upon all the members who feel aggrieved to send in a claim, and let their qualifications be fairly decided by the whole of the Council, according to the same standard which they adopted with respect to a large number of the present order of fellows.

That the Government are ready to

* See the letter signed Mediator (p. 939). The writer of this letter is one of the selected, a practitioner of long standing and of great experience.

join the College in carrying out a principle of this kind will be apparent from the following extract, forwarded to us by a correspondent who heard Sir James Graham make the observation in answer to a deputation of members.

"Sir James Graham said, he did not regret that he had devoted much time to the consideration of this subject. He felt that a class so useful, so honourable, and usually so peaceful, as the medical profession, deserved the highest care of the Government. *If the members of the College of Surgeons could prevail upon the Council to extend the num'ber of fellows, he would gladly co-operate in the obtaining of a new charter of incorporation from the Crown.* But he could not undertake to coerce the Council to such a step. The matter now lay entirely between the members and the Council of the College of Surgeons."

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Tuesday, April 8, 1845.

DR. WATSON, VICE-PRESIDENT,
IN THE CHAIR.

On the Colostrum of the Cow: with Remarks on that of the Human Subject.
By JOHN DAVY, M.D. F.R.S. Inspector-General of Army Hospitals, &c. [Communicated by DR. HODGKIN.]

THE colostrum—the new milk of the cow after calving—differs, as is well known, from the ordinary cow's milk, in being of a rich yellow colour, less liquid, of greater specific gravity, and in possessing the property of coagulating when heated. On this account it has been supposed to be more animalized than common milk, and to contain even serum. This inference not having appeared to the author to be satisfactorily proved, and, *à priori*, not very probable, he was induced to subject it to some trials, the results of which he describes.

The details of these experiments are given, and the inferences he draws from them are to show that the peculiarities of the colostrum do not depend on the presence of serum—in short, that the colostrum is destitute of serum; and that its coagulability by heat depends on a peculiar modification of its caseous portion.

That the caseous portion of milk does admit of no inconsiderable modification is shown (the author observes) in a remarkable manner in comparing it as existing in human milk, and in cow's milk; in the latter, even in its ordinary condition, it is so readily coagulable, whilst in the former it resists this change, whether acted on by acids or rennet, and yet is easily obtained by means of evaporation when freely exposed to the air.

Physiologically considered, the most marked circumstances belonging to colostrum are—the concentration of nutritious matter in it, the greater facility of its coagulation by rennet, compared with older milk, and its greater power of resisting change when exposed to the action of atmospheric air. These the author remarks are qualities which may be eminently serviceable, viewing it as the first food of the young animal. Its easy coagulation may adapt it to the stomach, in which organ probably the gastric juice is at first small in quantity and feeble. Its power of resisting change, and remaining semi-fluid, may render it fitted in the intestines to promote the removal of the meconium; whilst its concentration as nutritious matter may fit it to perform for the calf the same part that the substance of the egg serves, which enters the intestine during the latter stage of foetal development, in the instance of birds, reptiles, and fishes.

The author observes, that if his inferences as to the use of the colostrum in the cow are correct, it may be expected that the first milk of other animals, at least of those, the young of which are born fully formed and vigorous, will be found similar; and, so far as he has been able to learn, it is so. Whether the first milk of those animals the young of which are helpless and feeble—as the carnivoræ—is also similar, cannot be determined for want of facts; but he is disposed to conjecture that it is, having found the first milk of the bitch to coagulate when heated, and to yield a large proportion of animal matter (35·2 per cent.)

In the carnivora, it may be requisite for the first milk to be rich, as these animals have to leave their young to procure food, and to be absent, it may be, an uncertain time. In accordance with this, too, the author observes, is the fact that the human milk, the first drawn, is not unusually rich, and does not coagulate when heated; at least, such are the results of the experiments he has made, and which are given in the paper.

The author concludes by remarking that this diluted state of the human colostrum seems equally suitable to the offspring and mother: the one, helpless and feeble, not requiring concentrated nourishment; the other, commonly from a certain degree of exhaustion during labour, ill fitted to yield

such a supply,—offering, in this point of view, another instance to the vast number of examples of harmonious adaptation, and it may be, also, one circumstance more by which man, as an animal, is distinguished from every other.

Dr. Copeland rose at the conclusion of the paper, and expressed his opinion that the chief object of the Society was the reading and discussion of practical papers. He therefore felt aggrieved that a paper so entirely chemical, and some of the physiological points of which were so questionable, had been allowed to be read, particularly as so many papers of a practical nature were in possession of the Society, for the reading of which there was so little time. Something was due to an author in the selection of a paper, but something was also due to the Society, as members were disappointed when papers like that just read, were brought before them.

Case of Obstruction of the Large Intestine, in which the ascending colon was opened with success, the patient dying three months afterwards of another disease.
By SAMUEL EVANS, Esq. of Derby.
[Communicated by WILLIAM BOWMAN, F.R.S. Assistant-Surgeon to King's College Hospital.]

Lewis Street, æt. 23, a farmer, has been liable for several years to attacks of diarrhœa. In September 1843, he was seized with violent pains in the bowels, resembling colic, which lasted thirteen hours. About the third week in January the attack recurred, and became more severe on the 5th of February: the author saw him for the first time on the 7th. He was suffering from severe intermittent pains in the abdomen, which was distended, but free from tenderness. There was a distinct swelling in the right iliac region. His bowels had not been relieved since the 5th. Opiates, active aperients, and stimulating injections, were administered during five days without relieving the pain and sickness, or procuring evacuations. On the 12th and 13th, his sufferings were relieved by large doses of the *Liquor Opii Sedativus*. From this time to the beginning of April the size of the belly gradually increased; he also daily suffered many paroxysms of pain; at intervals, large quantities of flatus, and small portions of clay-coloured fæces, escaped from the bowels. The patient's health became much impaired, and vomiting recurred almost daily. On the 25th of March, Callisen's operation, as modified by Amussat, for the formation of an artificial anus in the loin, was proposed, but the patient yielded to the wishes of his friends in postponing it. This emaciation increased, and the abdomen

became distended to the greatest possible degree; the evacuations entirely ceased, and the pulse became feeble and fluttering.

April 9th.—The operation was performed. A transverse incision, four inches long, was made in the right loin; the ascending colon was opened, and more than two gallons of semifluid clay-coloured fæces were discharged. He recovered from the operation, and by May 9th had gained flesh; the wound in the intestine had healed, but the evacuations escaped entirely by the artificial anus, being restrained by a plug in the orifice, which is removed four or five times a day. At the end of June he commenced passing diabetic urine, and to suffer from thirst.

He rode a distance of six miles in an uneasy cart, and shortly afterwards symptoms of peritonitis supervened, and he died on the 5th. On examination of the body, the cause of obstruction was found to be a stricture in the colon, just beyond the angle formed by the junction of the ascending and transverse portions of the gut. The contracted part was almost as hard as cartilage, and would only just admit a crow-quill; its inner surface was ulcerated. The cœcum was enormously distended, and nearly as large as a stomach of ordinary size; the ascending colon was also much enlarged.

The author remarks that this is the eleventh case on record in which Callisen's operation, modified by Amussat, has been performed in the adult in consequence of obstruction in the intestinal canal. From the previous history of the case, it would appear that the disease had been of slow progress, and of considerable duration; but at the period to which the operation was delayed, owing to the interference of the patient's friends, he was in so alarming a condition that it is impossible to imagine a case more unfavourable for the operation. Two months afterwards he was so much recovered that there appeared to be every prospect of his restoration to health; but these hopes were disappointed by his imprudence in regard to diet and exercise; but as far as the operation is concerned, the case was successful.

Sir George Lefevre remarked on the indiscretion of the patient in going about so soon after the operation, and thought this should have been prevented by the medical attendant. Local and general treatment, together with the recumbent position, and strict attention to diet, were essential to the satisfactory conclusion of such a case. He briefly referred to two cases of which he had drawn up a description and published. In one of these cases a lady of distinction in St. Petersburg had had the colon punctured merely for the purpose of relieving the pain caused by distension. In this case the suf-

fering was extreme ; there was incessant vomiting and most urgent distension. A trochar was plunged into the colon, an escape of gas took place, and relief ensued. She died, however, in eighteen hours afterwards. In another case of internal obstruction the patient survived the operation twenty hours. Would an operation of this description be considered justifiable in this country, merely with a view of relieving symptoms, the termination of the case being certainly, either way, fatal ?

Mr. Benjamin Phillips regarded the paper as a very important one. The operation had been performed many times, with various success, both for obstructed bowels and imperforate anus. As far as he knew it had been generally unsuccessful. The operation itself was by no means a difficult one, the real difficulty in these cases being to determine the circumstances which justify the proceeding. On what did the obstruction depend ? Cases of obstruction presented themselves, dependent on the collection of hardened feces, in which the patient became emaciated, and the symptoms presented all the appearances of internal strangulation, yet these cases were relieved without operation. If the obstruction were the result of disease in the rectum, as for instance carcinoma—of which disease Broussais was said to have died—there would be little difficulty in detecting its nature, and an operation like that under consideration might be performed with the chance of prolonging life, but even here we only substitute one infirmity for another, and it might be questionable which was the most difficult to be borne with. It was when the obstruction was situated higher up that it was difficult to decide on what it was dependent, and in what way we should proceed. The contraction, in fact, might exist at the very point at which the operation was usually performed. In Mr. Evans's case there was no indication presented to warrant us in drawing a conclusion as to the precise cause of the obstruction. Indeed, from the occasional passage of clay-coloured feces, it might have been diagnosed as arising from fecal accumulation, instead of being, as it was afterwards found, a stricture of the colon.

Dr. Powell remarked that it was surprising how long constipation might exist in hysterical patients. He related the case of a lady who was constipated for three weeks, and who was relieved by the use of opium and croton oil. On one occasion she had no evacuation for two months. Injections were of no avail, and she took as much as half a grain of morphia and two drops of croton oil night and morning. In this case he believed the obstruction to be dependent merely on hysteria.

Mr. Davis related the case of a man who had been invalided from the West Indies,

and whose bowels were moved only once in three weeks. His health was good ; but he was occasionally subject to spasmodic pain in the abdomen. Extract of colocynth with opium was given without effect, and he then took a gamboge pill three times a day, with small doses of Epsom salts. This usually succeeded in procuring an evacuation containing a great number of scybalæ every three weeks. The only unpleasant symptom under which he laboured was occasional attacks of spasmodic colic. Under this treatment his appetite improved, though he would now and then reject his food. He detailed another case of constipation following parturition, in which an evacuation, when it was obtained, was found to contain a great number of scybalæ. He mentioned these cases as illustrative of the effects of proper treatment in prolonged constipation.

Mr. Solly agreed with Mr. Phillips as to the difficulty of determining the cause of obstruction in cases of prolonged constipation. Every surgeon in practice must have experienced this difficulty. He recollected a case which occurred some time since of a woman who was tapped for what was supposed to be ascites, but which was found after death to be simple distension of the colon with feces, the result of scirrhus of the rectum. He particularly referred to those cases of internal obstruction which resulted from the passage of adhesive bands from one portion of intestine to another. Some years since he had seen a case of this description with Dr. Sutton of Greenwich. He (Mr. Solly) had been called on to pass a rectum bougie in a case of obstinate constipation. This was readily done, no impediment to its passage being encountered. The patient died four days afterwards. A band of adventitious membrane was found extending from the colon to the mesentery, completely binding down the former, and obstructing its canal.

Dr. James Johnson considered that in Mr. Evans's case there was little difficulty in deciding at what point the obstruction existed. The fact of the bougie having readily passed, combined with the ready injection of three pints of fluid, and the position of the distension, indicated that the obstruction was near the *caput coli*. The operation he considered to have been perfectly justifiable. It was astonishing how long fecal accumulations might exist without seriously affecting the general health. He had a patient at present under his care who had not passed any feces by the rectum for the last three months. He was suffering from a large inelastic tumor near the *caput coli*, and daily vomited up fecal matter. His appetite was good, his general health unaffected, and there did not appear to be any signs of a fatal termination. It might be a question how far an operation in this case might be advisable.

Mr. Dunn related the case of a child who was born with imperforate bowel, the obstruction being situated so high up that a bougie could not reach it. No operation was performed, and after death the colon was found to be not larger than a crow-quill.

Mr. Blizard Curling observed, that it was by no means an easy matter to reach the colon by operation, particularly in infants, and when that canal was undistended. He related a case in which this was attempted; the surgeon, however, cut down upon the kidney. In a case of imperforate anus, in which attempts to reach the rectum were fruitless, he advised the operation of Amussat; but it was not acceded to. After death, however, he (Mr. Curling) performed the operation, and found it less easy, than some gentlemen would appear to think it. By cutting a little too near the spine he came upon the kidney, an accident which he believed had occurred on more than one occasion when the operation had been performed on the living body. When the colon was distended, and the incision was made a little more externally, there would be no difficulty in reaching the intestine. He agreed with Dr. Johnson that in Mr. Evans's case the cause of the obstruction was sufficiently evident to justify the operation. This case, indeed, offered a sufficient encouragement to other surgeons to resort to this proceeding, particularly in those cases in which the obstruction was as evident as in this instance.

Dr. Taylor remarked, that as Mr. Evans was clear in his opinion as to the seat of the obstruction in this case, the operation was justifiable, and had undoubtedly prolonged the life of the patient. There was nothing in the paper to show the nature of the obstruction—whether it was carcinomatous or otherwise. The microscope probably would be the only means of deciding this. It would appear, however, from the history of the case, that it had originated in simple inflammation. It appeared that the patient had for some years been subject to diarrhoea; this was probably the result of inflammation, which had afterwards proceeded to ulceration, cicatrization, and contraction. He had seen similar cases of contraction from ulceration the result of fever, though not always situated in the same spot. In most of these cases no operation had been contemplated, and the patients had died from chronic peritonitis before the obstruction had continued sufficiently long to warrant any operative procedure. He thought that one mode of distinguishing whether the obstruction depended simply on the accumulation of hardened faeces or on structural disease, would be to determine whether the patient had previously suffered from inflammation of the bowels. If so the obstruction was probably structural. He had seen these obstructions in the small intes-

tines frequently follow fever. They were the result of ulceration, cicatrization, and subsequent contraction.

Mr. Hilton considered that in Mr. Evans's case the treatment with respect to the operation had been most judicious. The position of the obstruction was obvious, and the operation was therefore justifiable. He referred to cases of obstruction in the intestines resulting from a twisting of the colon upon itself, and of which he had lately seen an instance. The operation of Amussat was proposed, but not performed. After death a vertical incision was made in the line of the abdominal muscles from the false ribs to near the crista ili: there was no difficulty in reaching the colon by this proceeding. The cases mentioned by Sir George Lefevre, in which the peritoneum was punctured, were very different from those under consideration, in which it was the object of the operator to avoid wounding that membrane.

Dr. Watson, from all he had seen or heard on the subject, had come to the conclusion that the question of the operation was to be decided by the special circumstances of each case. In a case like that of Mr. Evans the operation was justifiable, provided the patient had been acquainted with the nature and consequences of the proceeding previously. Other cases might occur, like that related by Dr. Johnson, in which, however inconvenient, it would be considered advisable to allow faecal evacuations by the throat, rather than resort to the formation of an artificial anus. Other cases would occur in which it would not be possible *à priori* to decide whether an operation were advisable or not.

ROYAL INSTITUTION.

On Friday, April 4th, Mr. S. Solly, Assistant-Surgeon to St. Thomas's Hospital, gave a lecture on the "*Protective Apparatus of the Brain and Spinal Cord in Man and Animals.*" The lecturer pointed out the necessity for an important organ like the brain being protected from external violence, and adverted to the wise provision of nature in enclosing it in a rounded osseous cavity, so that on every side it presented in its form the mechanical advantages of the arch. The structure of the external table was fibrous, and well fitted to resist sudden shocks. In the cavity of the skull the different parts of a soft organ like the brain were in some measure insulated, and prevented from pressing unduly on each other by the processes of the dura mater, the falx major, falx minor, and tentorium. With this mechanical disposition, the head might be moved about freely, and even sustain some violence, without having its structure deranged. In the young the bones of the skull are highly

elastic: they readily yield to shocks; and a blow, which would have the effect of stunning an adult, passes off unheeded by a child.

Another point to be considered, was the means taken to prevent the effect of undue excitement in the circulation of blood through the brain. This organ, it is well known, is abundantly supplied with blood by means of the carotid and vertebral arteries. The carotid arteries take a very tortuous course through a bony canal, and thus, under great excitement, the too rapid supply of blood is impeded,—a fact made evident by the violent pulsations of the vessels on the outside of the head and neck. In the cat tribe, the internal carotids divide into numerous branches about the sella turcica, forming a network or diverticulum of vessels, called rete mirabile. These afterwards unite and form a trunk, which then divides again, and is distributed through the brain. This kind of arterial reservoir prevents any surplus blood from being thrown too rapidly on the brain under violent muscular exertion, as when these animals spring on their prey or throw themselves from a great height.

Some remarks were made on the mechanical form of the spine, its curved shape being so adjusted as to allow it to receive or resist shocks like a doubly-bent spring. The bony protection for the spinal marrow and nerves, and the manner in which great flexibility and freedom of motion are combined with great strength in this part of the skeleton, were also pointed out. The lecture was illustrated by a number of well-executed drawings.

TRIAL FOR WOUNDING.

[THE following trial is of interest in relation to the manner in which wounds may be produced.]

Midland Circuit.

Warwick, Wednesday, April 2.

Joseph Ankers, aged 36, was indicted for having, at Birmingham, on the 24th of December last, feloniously stabbed, cut, and wounded Edward Perry, with a certain sharp instrument, to wit, a penknife, with intent to do him some grievous bodily harm; the indictment charging, as usual, the intents to murder, maim, and disable.

The prosecutor, it appeared, had grossly insulted, and also assaulted, the prisoner's sister. The prisoner resented this, and a scuffle ensued, when he was seen to have in his hand something that looked like the hasp of a penknife, and a penknife was afterwards found upon him. The prosecutor received a clean cut, as from a penknife, two inches long, and one deep; but he had fallen, and there was some broken crockery lying about the place where he fell.

For the defence, it was urged that the wound and other cuts were not inflicted with the knife, but by the fall among the broken crockery; but

Mr. Justice Maule, in summing up, told the jury that all the evidence was dead at variance with this supposition, and it might as well have been urged that he cut himself by tumbling upon an apple or a pound of butter.

The Jury returned a verdict of *Guilty*.—*Times*.

MALAPRAXIS IN MIDWIFERY.

ALLEGED MANSLAUGHTER.

Norwich Lent Assizes.

RAYMOND GACHES, aged 48, was indicted for that he, being an apothecary and man-midwife, so negligently, carelessly, rashly, and feloniously conducted himself in his attendance on one Jane Mary Lovett, in her delivery, as to inflict divers mortal wounds on her body, whereof she died on the 9th of January last, at Costessy, in this county.

Mr. Evans and Mr. Palmer appeared for the prosecution; Mr. Prendergast and Mr. O'Malley defended the prisoner.

From the evidence of Honor Mortar and other witnesses it appeared that Mrs. Lovett had had nine children before the occasion which terminated fatally, and that on former occasions a difficulty had presented itself in the removal of the placenta, the danger from which was well known by medical men to increase with each labour. On the 19th of January the poor woman was taken ill, and the defendant called in to attend her at 11 o'clock. For some time the difficulty anticipated did not arise, but it did at length, and the nurses suggested further advice. The defendant, however, declined it, saying that "if there was a room full of doctors they could do no more than he was doing." After this he seemed to be using great exertions with the view of relieving the patient of the placenta, and after a while a round substance came forth, such as had never been seen before by the nurses in their experience, and he was then seen to use his scissors under the clothes. At that instant the features of the sufferer underwent a sudden change and shock, on which the "doctor" observed "she was very sadly, and he would go and fetch some medicine." So saying, he placed the substance above mentioned, and some other thing which he had afterwards taken from the bed, in a vessel, which he took away with him. In the course of half an hour afterwards the patient died in great pain, and, being duly buried, nothing more would, perhaps, have been heard of the case, had not the

defendant, when interrogated by the mother, stated that the substance he had taken away was a tumor, weighing three ounces and a half, and that he had taken it to Mr. Crosse, the well-known surgeon in Norwich. This was for the time satisfactory to the inquirer, but afterwards a suspicion was excited that the defendant had not conducted himself properly towards the deceased; and her body being exhumed under the direction of the coroner, was submitted to examination by Mr. Crosse and Mr. Francis, who ascertained that the uterus and a considerable quantity of the large intestines had been torn away. The evidence of these gentlemen was given to-day to the above effect, and they gave it as their opinion that great blame was attributable to the defendant if the removal of those parts was ignorantly effected by him, and still more so if it had been knowingly done: at the same time, they admitted that the case was not one of every-day occurrence, and that no stronger term than ignorance ought to be attached to his treatment of the patient; while the most skilful surgeons and operators were known to have "made mistakes."

Mr. Prendergast, on behalf of the prisoner, contended that the course pursued towards him was somewhat harsh, as it was unfair to expect from every man embarked in so critical a profession the consummate skill of an Astley Cooper or a Dr. Conquest, whose book on midwifery he largely quoted.

Mr. Justice Patteson, in summing up the case, thought that the question was not whether the defendant wilfully had removed the parts in question, for no man in his senses could do that; but it was for the jury to say whether, under all the circumstances, he had done more than fall into a mistake. *For a mere error of judgment he did not think that a medical man ought to be made criminally responsible, unless he had displayed gross professional ignorance or inattention to his patient.* The nurses all bore testimony to his kindness and attention, and it would therefore be for the jury to say whether they thought he had acted with such gross ignorance as was imputed to him by this charge.

The jury, without much hesitation, returned a verdict of *Not Guilty*.

From the verdict of the jury, given, as it is said, "without much hesitation," it would appear that Mr. Raymond Gaches in removing from a female during parturition the uterus and all the large intestines (see evidence below) did not display "gross professional ignorance or inattention to his patient," the test of criminal responsibility on such occasions, according to the learned judge. This is the third case of "disembowelling" which has occurred in midwifery

practice (!) during the last year. Mr. Gaches is more fortunate than Garland and Gullimore, both of whom were committed and sentenced to imprisonment.

We are indebted to a friend for the subjoined evidence of the medical witnesses given at the inquest at Costessy. We shall return to the subject in a future number.

Post-mortem Examination of a female who died during labour.

Costessy, Feb. 28th, 1845.

William Bransby Francis, surgeon, of Norwich, says as follows:—

I have examined the body shown to me as the body of J. M. L. On opening the cavity of the abdomen, I observed the stomach, small intestines, and bladder; and there was some blood effused into the parts about the pelvis. I took out the small intestines, which had no attachment below; the stomach was then removed, but the large intestines appeared to be absent. The bladder contained about three ounces of urine; the small intestines were then measured, and found to be fifteen feet and eight inches in length. At the lower end the intestines had been torn off. The kidneys were healthy as well as the liver. On removing the parts from the pelvis, I found thirteen inches of the large intestines in the vagina, which was lacerated, but there was no womb. In my opinion death was caused by the injuries inflicted in removing so large a portion of the large intestines and the womb. In the most difficult case of child-birth, there ought not to be any of those parts removed. I never met with a case in which they were removed. In removing these parts I consider there was a great want of skill and judgment. I should think no practitioner at all acquainted with midwifery would remove them; the removal of them would cause almost instant death. I see no reason why after the birth of the child, if proper skill had been used, that the life of the deceased might not have been saved. The length of the intestines in any ordinary case is about twenty-seven feet, or about five or six times the length of the body.

W. BRANSBY FRANCIS,
Surgeon.

John Green Crosse, surgeon, of the city of Norwich, says as follows:—

I have also examined the body shown to me as the body of J. M. L., in company with Mr. Francis. I have heard the whole of his evidence, and confirm all that has been stated in reference to the parts found in the abdomen. The parts entirely absent were the womb with all its appendages; all the great bowel except thirteen inches from the fundament upwards, a small portion also of the small intestines, had been removed with the large, so that altogether many feet of bowel

had actually been removed by the vagina. There was every appearance of the removal having been made by laceration. The removal of the womb and such a quantity of the intestine must necessarily prove fatal. There are no circumstances that would admit of or require the removal of either one or the other. Such an injury could only have been inflicted in error, no circumstance could have required or justified such a practice. I have heard all the evidences, and find that I cannot see any reason why after the birth of the child, if the deceased had been properly treated, her life might not have been spared.

JOHN GREEN CROSSE.

Inquest held by Mr. Pilgrim, one of the County Coroners, February 28th, 1845.

MEDICAL REFORM.

To the Editor of the Medical Gazette.

SIR,

THE disturbed state of the profession renders it incumbent on all who are anxious for its honour and respectability to offer any suggestions that may tend to allay the discontent that prevails, to a considerable extent, amongst a portion of the general practitioners of the country. I therefore request your insertion of the following remarks.

The merits and demerits of Sir James Graham's Bill have been so fully discussed, that extended comments on so hackneyed a theme would scarcely excite the attention of your readers. I shall therefore chiefly allude to the conduct of those general practitioners who have been most conspicuous in their opposition to the measure.

The object of those gentlemen appears to be, either the continuance of the Apothecaries' Company, with their present and perhaps additional privileges, or the formation of a new corporation, consisting exclusively of general practitioners, who shall have the power of framing laws and regulations for the government of this branch of the profession.

Either of these schemes would have the effect, eventually, of separating this class from the College of Surgeons, and it behoves all who are interested in the welfare of their profession to pause before they support a system so calculated to injure its reputation as a scientific body, and lower its estimation in the minds of the public.

A strong feeling of indignation against the Council of the Royal College of Surgeons can alone account for the zeal with which the interests of the Apothecaries' Company are upheld by men, who, till lately, never appeared to set any value on their connection with that body; who went before their

examiners only on compulsion, and because they could not otherwise legally practise pharmacy; who have always been ashamed to assume the title which the Apothecaries' license conferred, and, with few exceptions, have sought voluntarily the diploma of the College of Surgeons, although that document gave them no legal privilege.

This undeniable fact shows how favourable were formerly the feelings of the younger members of the profession towards the College, and should induce them to deliberately consider the policy of their present proceedings, and reflect on the condition in which they will be placed if they sever that connection which has so long subsisted between them and the College of Surgeons.

The members of the College of Surgeons, most of whom are general practitioners, have long complained that they had no voice in the election of the council. This, indeed, has been their chief grievance; but they have never manifested the same desire to assist in the choice of the examiners or rulers of the Apothecaries' Company: a strong proof of the contempt, or, at least, indifference, in which they held that body. It is, indeed, notorious that the Apothecaries' license gives no privilege, except permission to practise pharmacy, as, if the members wish to partake of the trading profits of the company, they must purchase a right to do so, as they would buy a share in a railway, or other joint-stock concern.

If the general practitioners succeed in establishing a new College, or in effecting a change in the Apothecaries' Company, that will separate them entirely from the College of Surgeons; they will be under the government of a few leading metropolitan apothecaries, highly respectable individuals, possessing large fortunes, and the influence which wealth can always command. Many of these gentlemen are active, intelligent, and enlightened practitioners, but I mean no offence in saying that, collectively, they have not attained that eminence in science, or professional celebrity, that ought to distinguish the governing body of so influential, able, and useful a class, as the general practitioners of this country.

I hope, therefore, that these considerations will induce the general practitioners not rashly to dissolve a connection which they have hitherto esteemed, and which they cannot abandon without inflicting irretrievable injury upon themselves and the public. I hope, too, that the Council of the College of Surgeons will relax the measures which have given such offence to the majority of their members, and by a more liberal policy endeavour to preserve that union which is so decidedly advantageous to all parties.

With the view of effecting so desirable an object, I shall make a few remarks on the

charter of the College, and the conduct of the council.

It is generally believed that the new charter of the College of Surgeons was framed in accordance with the opinions of the council of that body. In effecting so important and comprehensive a change in the laws of the College, the council appear to have been desirous to comply, to a certain extent, with the wishes so long and so loudly expressed by the members at large, that the governing body should not be self-elected, nor hold their situations for life: but, as men, either collectively, or individually, do not willingly relinquish power, the council retained most of the privileges which they already possessed, and recommended only that future members of the governing body should be appointed by a more extended suffrage, and for a limited period.

Whatever dissatisfaction may have been produced by the old council's permanent retention of office, it should be remembered that this evil, if it be an evil, will be only temporary, and will cease with their lives. The measure, therefore, is scarcely worthy of the severe reprehension with which it has been treated by some opponents.

The most important feature in the new charter is the division of the members into two classes. The institution of Fellows, who cannot be admitted till twenty-five years of age, will induce the candidates for this class to obtain a more extended preliminary education than the present members generally have received. Indeed, it is probable that, in many instances, a collegiate education will be resorted to, before the commencement of professional studies, and as the latter must be taken out before the mature age of twenty-five, and the fellowship then obtained only after a strict examination, it is evident that this plan will have the effect of introducing into the profession of surgery persons, who, from position and acquirements, will be best calculated to raise its respectability, and advance its knowledge; while the admission of members, at the age of twenty-one, will enable those who do not choose to continue their studies to a more protracted period to settle, and pursue the line of general practice at the earliest possible age.

The charter delegated to the council power to appoint a certain number of fellows from the members at large, to form an immediate constituency for the purpose of electing three additional members of council. It is perhaps impossible to arbitrarily select, for elevation and distinction, a few from a large community, whose privileges, individually, are equal, without the remainder feeling degraded at their omission. It was, therefore, the duty of the Council to perform this task in the way least likely to inflict in-

justice on any one who considered he had a claim to the Fellowship. To have made at once all the members Fellows, as has been proposed by some, would have merely changed a name, and vitiated the whole scheme. The only mode, therefore, which could have prevented any reasonable complaint is that of seniority. If the Council had promoted the senior five or six hundred members to the fellowship, on the condition that they should be succeeded at their deaths, by their juniors, in regular rotation, during the lives of all who may be members at a certain date, and that younger members, who declined waiting their turn of seniority, might obtain the Fellowship by examination, I believe we should have heard but little of the clamour which has been so mercilessly raised against the members of the Council, in regard to the period to which admission to the fellowship by seniority should have been manifested. The bye-laws relating to the fellowship state that new Examiners shall be appointed on or before the 1st day of January 1850, and it is probable that the new regulations will not be in full operation before that period: it would therefore have been proper to have fixed that date as the latest at which Fellowships should be obtained by seniority of Membership. This plan would have prevented any complaint of injustice either by members or by students who commenced their professional studies under the old *régime*. It would, it is true, have excluded from the Fellowship many of the present hospital surgeons, and all those who expect to be their immediate successors; but it is worthy of deliberate consideration how far some modification of the plan might not be advantageously adopted. If a supplementary charter were granted, giving the Fellowship to a few hundred senior members, in regular succession, of all who obtain their diplomas before the 1st of January, 1850, and enjoining that, after that date, none shall be Fellows, except by examination, the present angry feeling of the members would be abated, the merits of the charter would be acknowledged, and the measure would at least receive that calm and dispassionate investigation to which it is entitled.

I have no selfish object in offering these remarks, as I cannot be personally affected by any arrangement that can be made for the government of the profession, and I have no feeling of disappointment, as my name appeared in the first list of Fellows of the College; as, I imagine, from my standing, would have been the case if the plan I have suggested had been adopted. I have reached the period of life that renders it necessary for me to retire from active professional duties; but, nevertheless, I am anxious that the present excitement should subside; and in the hope that unanimity will soon prevail

amongst all classes of the profession, I beg to subscribe myself, sir,

Your obedient servant,
MEDIATOR.

THE SURGEONS' COLLEGE OATH.

To the Editor of the Medical Gazette.

SIR,

IN one of your late numbers there is a letter signed M.R.C.S., from Liverpool, on the subject of the College of Surgeons' oath. I beg leave to give you my thoughts upon it. The writer speaks well of the inviolable obligation of the oath taken by all admitted members, but he does not appear to have considered its application to the Court of Examiners and Assistants, as he has to the ordinary members. Certainly, both the governors and the governed are under the same oath respectively; and if the one party is to be tried by his oath, and the other not, that is a sure way of bringing an oath into desecration and contempt. Now how stands this matter at the College? The member swears, among other things, that he "will maintain the dignity and welfare of the College," &c., including all "the bye-laws and rules." Then let it be remembered that this oath binds him still, if he subsequently becomes promoted to a seat in the court of the College; and what does his oath require him to do when he gets there? See the article, "Rights of Members." "The College will at all times protect and defend every member thereof who shall in any manner be disturbed or interrupted in the exercise of, or be in danger of losing any, of the rights, privileges, exemptions, or immunities, to which, as a member of the College, he is entitled." If the spirit of this article had been faithfully kept, would it not have prevented the present commotions in the profession? Where is the list of complainants (against aggressive brethren) who have been relieved by the protection and interference of the College? The truth is, that there has been no violation of the oath by members joining the National Association of General Practitioners. The great majority of these, when they took the oath, belonged, or intended belonging, to the Apothecaries' Society; and independently of the proposed annihilation of that representative head, they would have a civil right to reorganize, if expedient, that department of the profession under a new name and system without in the least touching their oath made to the College of Surgeons.—I am, sir,

Your obedient servant,
A PRACTITIONER.

April 7, 1845.

HEREFORD MEMORIAL.

*To the Rt. Hon. Sir James Graham, Bart.
Her Majesty's Secretary of State for
the Home Department.*

The Memorial of the Surgeons of the City and County of Hereford.

SHEWETH,—That your Memorialists, Members of the Royal College of Surgeons of England, resident in the city and county of Hereford, in compliance with the oath they have recently taken, on being admitted members of the college, to maintain its dignity and welfare to the utmost of their power, feel it to be an imperative duty respectfully to call your attention to the injustice displayed in the mode of carrying out the charter recently granted to the Royal College.

Your Memorialists cannot but feel, that the Council of the Royal College of Surgeons of England has broken faith with the general body of the members, by the principle of election to the newly created grade of the Fellowship, which it has seen fit to pursue. Full power was given to the Council by the new charter to carry out this principle in a way which would not have interfered with existing rights and privileges, but it has not done so; and further, your Memorialists consider that the course it has adopted is most injurious and degrading to the overwhelming majority of its members, and utterly at variance with those principles of honour and justice which should ever distinguish a Royal College.

Your Memorialists fully recognise the right of merit to the distinction of the Fellowship, but this principle of election can only be justly carried out to a very limited extent, and when it is thought necessary to go beyond this, they are of opinion that the only just mode is then to make "length of standing in the profession" the means of admission for all present members to the Fellowship, (at once, if they have attained the requisite period, or as they respectively do so,) since it is the only plan, which, from its not being retrospective, would prove satisfactory to the members in general, and regain for the Council that perfect confidence which has been so much shaken by a departure from it in the late proceedings.

For these reasons, your Memorialists would humbly but earnestly suggest for your consideration, the propriety of advising Her Majesty to grant a new charter to the Royal College of Surgeons of England, or to sanction such a modification of the present charter as will effectually remove the injustice which has been thus cast upon the majority of the members of the college; or, in the event of neither of these plans being deemed

admissible, your Memorialists would also respectfully suggest for your consideration the propriety of advising Her Majesty to grant a separate Charter of Incorporation for the General Practitioners, as a measure then essentially necessary, in their opinion, for the maintenance of the welfare and prosperity of this most important class of the profession.

[Signed by 43 members of the College, whose diplomas date from 1796 to 1843.]

EXAMINATIONS AT THE UNIVERSITY OF LONDON AND APOTHECARIES' HALL.

THE following returns were obtained by Mr. Christie, the member for Weymouth, of the candidates for medical degrees, and the number who have taken such degrees, in each year since the foundation of the new University. From 1839 up to 1844, 268 persons presented themselves at the first examination for degrees as bachelors of medicine, of whom 176 passed; and 118 presented themselves at the second examination for the same degree, of whom 106 passed. During the same period, 33 persons presented themselves for the degree of doctor of medicine, all of whom passed. The number of colleges in connexion with the University of London appears to be 26, and the number of medical schools recognised by the said University (exclusive of 17 independent lecturers) to 53.

According to the above document, on an average of six years, *i. e.* from 1839 to 1844 inclusive, the following table will represent the results of the University examinations.

For the degree of Bachelor of Medicine.

	Examined.	Passed.	Rejected	Rej. per Cent.
1st Exam.	268	176	92	34
2d Exam.	118	106	12	10

For the degree of Doctor of Medicine.

“ 33 33 “ “

Thus the degree of Bachelor of Medicine has been conferred on 106 candidates, or rather more than 17 per annum; while the degree of Doctor of Medicine has been conferred on 33 candidates, or rather more than 5 per annum. The rejections at the first examination amount to more than one-third of the whole of those who presented themselves; at the second examination, to one-tenth. This result shows that the candidates for the second examination are a superior class of men: the first list of candidates is, in fact, to use a technical term, weeded. There is one singular circumstance observable with respect to the second examination; *i. e.* that the number of candidates who presented

themselves was one-third less than the number who had passed the first examination; for while the former were 118, the latter were 176. It is highly creditable to the candidates for the degree of Doctor of Medicine, that there has not been a single rejection.

In presenting a similar table relative to the results of the examinations by the Apothecaries' Society, we do not intend that any comparison should be drawn; for, not to mention the much better (*i. e.* more strict and practical) kind of examination which takes place in the University, it must be remembered that the University is of recent establishment, and its degrees confer no legal privileges. The examinations of the Apothecaries' Society extend over a period of about thirty years, and its diploma is legally necessary to one who wishes to become, in England, a general practitioner.

Results of the Examinations for the License of the Society of Apothecaries during a period of twenty-nine years, i. e. from 1815 to 1844.

	Examined.	Passed.	Rejected	Rej. per Cent.
Total	11,564	10,033	1,531	
Average number per annum,				
	398	346	53	13

The rejections amount to an annual average, therefore, of 13 per cent. In the number examined are, of course, comprised a large number of the rejected of preceding years.

The Apothecaries' Society differs strikingly from the University, in the fact, that they have gone on the pernicious system of perpetually controlling lecturers as to the number of lectures, and pupils as to the precise time of their attendance, instead of allowing a reasonable liberty in this respect. The University have acted on a different principle; they require knowledge in the candidate, and care little where he obtains it.

RUPTURE OF THE SPLEEN.

A ROBUST man, about 40 years old, was engaged in a scuffle with another of the same size, and received one blow from the fist of his opponent in the left hypochondriac region; the combatants then clenched each other, and so equal were their exertions for five or ten minutes, that it seemed doubtful which would come off victor. At length, however, the strength of J. W. seemed suddenly to fail; he turned pale, staggered, and sunk helpless upon the ground, complaining of nausea, faintness, and pain in the left side. He was carried, in a sinking condition, a short distance to a house, where he expired, in about fifteen minutes after the termination of the conflict.

On dissection, twenty-four hours after

death, no marks of violence were observed on the exterior. The cavity of the pericardium contained about two ounces of effused serum. In other respects the contents of the thorax appeared natural; but, upon cutting through the abdominal parietes, exit was given to between two and three quarts of dark, partially coagulated blood. An extended incision brought into view the spleen, enlarged to about five times its natural dimensions, and so soft in texture as to be easily broken down under slight pressure from a finger. Upon its posterior surface was a lacerated fissure of about five inches in length, extending deep into the centre of the organ. It was evidently from the divided blood-vessels of this torn structure that internal hæmorrhage had taken place to such an extent as to cause immediate death.

The coroner's verdict was as follows:—"Death from lacerated diseased spleen, caused by a blow, fall, or over-exertion, while engaged in a scuffle with B. R." B. R. was tried for manslaughter, and acquitted, by the Circuit Court."—*Dr. Her-rick, in Illinois Med. Journ.*; and *American Journal of the Medical Sciences*.

MALFORMATION OF THE GENITAL ORGANS.

ENTIRE ABSENCE OF THE URINARY BLADDER IN A MAN.

DR. D. ROSS LEITCH had an opportunity of examining a singular case of malformation of the above nature in the person of a man, æt. 39. The man died after fracture of the femur extending into the knee-joint. The body was slight and effeminate; there were beard and whiskers, but only a few scattered hairs on the pubes. His voice had been weak, and rather shrill. There was no appearance whatever of a penis. The man declared that he had once possessed something of the kind, but nothing remained to corroborate the statement. As in the case of Highmore's boy, referred to by Dr. Duncan in the first number of the *Medical and Surgical Journal*, "all was entire and smooth," from the orifice of the ureters to the anus. The testicles were small but natural, similar to the cases mentioned by Dessault, Knox, and others; they were contained in folds of skin near the pubes. As is almost universal in these mal-conformations, the bones of the pubes were separated to a considerable distance from each other, the interval being filled up by a broad strong ligament; symphysis and descending rami of the pubes were wanting. By separating the acetabula and thighs to a greater distance than usual, this had rendered the man's walk less firm than common, and produced a rolling of the body from side to side. The anus was thrown so far forwards that

there could scarcely be said to be any perineum. A slight umbilical scar was visible low down in the hypogastric region, about an inch and a half to the right of the urinary orifice. There was no trace of the corpora cavernosa, or appearance of a scrotum. The epididymis on both sides was very observable, terminating naturally in the vasa deferentia, which, after a brief course, expanded into the vesiculæ seminales, and there, with the prostate gland, were attached to the posterior part of the conjoined ureters. Certain minute orifices, into which a bristle could be thrust, appeared near the mouth of the urinary passage; and these seemed to have given exit to the seminal fluid. The *left* kidney was nearly natural; the pelvis, however, was more capacious than usual, and the ureter on that side was slightly increased in its calibre. In the *right* kidney, the cortical substance had disappeared, and the organ presented the appearance of a globular membranous bag, the sides of which, as well as those of the corresponding ureter, were thick, firm, and condensed in their structure. The *right* ureter was twelve or fourteen lines in diameter. About an inch and a half from its termination on the surface of the abdomen it was contracted so as to perform the office of a valve. Muscular fibres could be traced at this portion of the ureter. Though the urine had continually dribbled away from the unfortunate patient, he declared he was able to expel it from time to time in considerable quantities: there is little reason to doubt the statement, for the right kidney and ureter were found after death filled with urine. Dr. L. thinks it probable that the water which continually trickled from the orifice came altogether, or in great part, from the *left* kidney, there being nothing in the corresponding ureter to obstruct its flow, but that the valve at the lower part of the *right* ureter enabled him to retain the urine in that distended canal, and the capacious pelvis of the kidney, for some time, and that, by the pressure of the abdominal muscles, the membrane at its valvular portion was so far overcome as to permit the discharge of the collected fluid. It seemed to Dr. Leitch a very curious and admirable instance of the ingenuity of nature in compensating original deficiency of structure. There was not the slightest trace whatever of the urinary bladder, but the ureters terminated at their point of junction on the skin above the pubes. There was abundant proof that the man had possessed the sexual appetite. It is also mentioned that the banns had been three separate and distinct times proclaimed at the parish church, between him and a woman who was attached to him.—*London and Edinburgh Monthly Journal*, February.

SEPARATION OF THE CERVIX UTERI IN PARTURITION.

DR. A. DAVIS, of Newry, attended a woman *æt.* 46, of low stature and rather corpulent, in labour of her fourth child; her eldest and her youngest child being still living. The labour was protracted, the uteri being very thick, and dilating very slowly to the size of a crown piece. On the third day it was considered, from examination with a stethoscope, that the child was dead. Anodyne enemata were prescribed; the pains continued, but diminishing in strength, until the morning of the fourth day, when a transverse rent, of about two inches in the cervix uteri anteriorly, was discovered. It was now determined to use the perforator, previous to which Dr. Davis divided the separated portion of the os uteri longitudinally, gave a dose of infusion of ergot of rye; and, after some time, extracted a large female child. The placenta was shortly after removed with little difficulty. She bore the operation very well, and soon after went to sleep. For a few days subsequently the patient suffered from swelling of the abdomen, and from slight bronchitis. On the sixth day after delivery the separated portion of the os uteri, which was very much enlarged, sloughed off. Dr. Davis thinks that two-thirds of the os uteri came away. From this time her convalescence was rapid."—*Dublin Medical Press*, Jan. 15, 1845.

[We should scarcely have ventured, with Dr. Davis, to administer the ergot in a case where any part of the uterus had suffered rupture; still the practice, in this instance, does not appear to have been attended with ill consequences.—*Ed. Gaz.*]

TO CORRESPONDENTS.

Received—Mr. J. Coventry's Remarks on Dietetics, Medicine, &c.; Mr. H. N. Shaw; Prize Clinical Reports of the Queen's Hospital, Birmingham; Dr. Blackmore; Dr. Letheby; Dr. R. H. Allnatt; Mr. George Padley; Thomas Taylor.

A proof shall be forwarded to Dr. Ritchie as usual. His papers will probably be reserved for the New Series.

We shall be glad to avail ourselves of Mr. Erichsen's offer: his contributions will be announced with those of other contributors.

We refer Mr. G. M. Davis to our leading article.

Dr. Rowland's paper is in type, and will have early insertion.

We regret that, owing to the press of matter, we have not been able to find room for many interesting communications; they will be inserted as soon as the state of our columns will permit.

Much credit is due to Dr. Orpen for his ingenious suggestions respecting anatomical

nomenclature, but we do not think that the publication of his Essay in our journal will be attended with any practical good.

Dr. Marsh.—In the New Series the present size of the *MEDICAL GAZETTE* will be preserved: there will be an additional number of pages, and the stamped edition will be transmissible by post, like the other medical journals.

MORTALITY OF THE METROPOLIS.

Deaths from all causes registered in the week ending Saturday, April 5.

ALL CAUSES.....	950
SPECIFIED CAUSES.....	943
I.—Zymotic (Epidemic, Endemic, and Contagious) Diseases, 132; among which, of—	
Small Pox	29
Measles	17
Scarlatina	11
Hooping Cough	35
Croup	7
Thrush	1
Diarrhoea	6
Dysentery	1
Cholera	0
Influenza.....	1
Typhus	19
II.—Dropsy, Cancer, and other Diseases of uncertain or variable Seat, 115; among which, of—	
Hæmorrhage.....	3
Dropsy.....	23
Scrofula	1
Cancer.....	16
Atrophy	12
Debility	18
Sudden Deaths	31
III.—Diseases of the Brain, Spinal Marrow, Nerves, and Senses, 165; among which, of—	
Hydrocephalus	34
Apoplexy.....	24
Paralysis.....	13
Convulsions	57
Insanity	1
Delirium Tremens	1
IV.—Diseases of the Lungs, and of the other Organs of Respiration, 301; among which, of	
Pneumonia.....	86
Hydrothorax.....	7
Asthma	23
Phthisis or Consumption	120
Diseases of the Lungs, &c.....	27
V.—Diseases of Heart and Blood-vessels	41
VI.—Diseases of the Stomach, Liver, and other Organs of Digestion, 60; among which, of—	
Teething.....	17
Gastritis	2
Enteritis	7
Tabes	7
Hernia	2
Disease of Stomach, &c.....	5
Disease of Liver, &c.....	10
VII.—Diseases of the Kidneys, &c.....	11
VIII.—Childbirth, Diseases of the Uterus, &c. 13; among which, of—	
Childbirth	10
Disease of Uterus.....	3
IX.—Rheumatism, Diseases of the Bones, Joints, &c.....	7
X.—Diseases of Skin, Cellular Tissue, &c. 1	
XI.—Old Age.....	62
XII.—Violence, Privation, Cold, and Intemperance.....	35

THE
LONDON MEDICAL GAZETTE,

BEING A
WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

FRIDAY, APRIL 25, 1845.

SOME OBSERVATIONS

ON

TETANUS, OR LOCKED JAW, AND
ITS TREATMENT.

By R. A. STAFFORD, F.R.C.S.

Surgeon Extraordinary to his H.R.H. the Duke
of Cambridge, and Surgeon to the St.
Marylebone Infirmary.

(For the London Medical Gazette.)

OF all diseases yet known, there is perhaps no one the causes of which we have less clear evidence than of tetanus. Much difference of opinion, therefore, has arisen with regard to its treatment. Some have conceived that sedatives are the only remedies to be relied on, while others on the contrary have rather chosen purgatives,—the exhibition of mercury to salivation,—the abstraction of blood to a large amount; with the addition of various other remedies too numerous at present to mention. The opinions, even yet, being at variance as to the nature and treatment of this disease, I am induced, having seen in my practice a few cases, to offer some observations upon it.

Those who have written systematically on tetanus, have distinguished it by two epithets; that originating from wounds they have called traumatic, and that produced from cold, or any other cause, idiopathic. They also have made other divisions of it, according to the particular parts of the body which are affected by it. Where only the muscles of the jaw are affected, they have given it the term of trismus; when the muscles of the back, drawing it backwards, opisthotonos; and when the body is drawn forwards, emprosthotonos; and when to either side, pleurosthotonos. These distinctions, as far as they go, are very good, but they do not explain to us any method of treatment by which we can relieve it.

In trismus, the masseter muscle is chiefly

affected, and is in a constant state of spasm. The jaw is completely closed, and the teeth are usually permanently fixed one against the other. It is impossible to open the mouth; the patient may use all his efforts, but the power is totally gone. In fact, to use the expressive English phrase, he has "the locked jaw." In opisthotonos, the spine is curved backwards, like a bow, but the back is not permanently fixed in this position, as the jaw is in trismus; for there are frequent paroxysms of spasm of the muscles of the back, temporarily increasing the curve. In emprosthotonos, the body is curved forwards, attended with spasm, but, according to my opinion, it does not so frequently take place as the other symptoms. In pleurosthotonos the body is curved either on one side or the other.

Traumatic tetanus mostly occurs after lacerated or contused wounds, and more particularly those of the tendons. Eight days is the period after an accident of this description upon which it is said usually to make its appearance, but it is quite uncertain, for instances have been adduced where it has shown itself much earlier; in some instances it has been known to occur even in a few hours. The first symptoms attendant upon it are a stiffness at the root of the tongue, and of the muscles of the hinder part of the neck, which become rigid, and the cervical vertebrae are rather drawn backwards. From this time the muscles of the jaw gradually contract, the teeth being closed, or nearly so, and there is generally great difficulty of articulation and deglutition. The next symptoms are, either a stiffness of the muscles of the back, or of the abdomen, generally of the former; and last of all, the whole body is affected by violent and repeated spasms, which come on in paroxysms, in one of which the existence of the patient is terminated. Added to these, the bowels are very inactive; the faeces when voided are of an unnatural colour, being, as Mr. Abernethy used to say,

like sloughs, and they are of a very foetid and offensive smell. The tongue is furred, the pulse extremely quick, and the organs of respiration are affected, the diaphragm participating in the disease, as well as the other muscles. The whole body is covered by a profuse sweat, exuding from the surface in large drops. In fact, in the last stages of the disease, there is hardly a muscle of the body which is not affected by spasm. The muscles of the face are distorted, the eyes are fixed, and the lips are opened, causing a peculiar sardonic expression. The muscles of the whole body are in one continued state of spasm. In short, like an earthquake, the whole foundations of the frame are shaken and convulsed. Nature is overcome, yields to the contest, and death ensues. In idiopathic tetanus the same symptoms occur, but the cause is different. It generally arises from internal irritation, such as a worm in the intestines, or from cold, &c.

In speaking of the causes of tetanus, we must take a general comprehensive view. The whole nervous system is involved in the disease, and therefore it cannot be one cause alone which will produce it. There are many. It is evident from the symptoms which occur in this disease that the medulla spinalis, or the medulla oblongata, are affected, and that the functions of the muscles which they govern are deranged. It is indisputably proved that the medulla spinalis sends forth two different set of nerves; the one governing the power of motion, and the other that of sensation. From the phenomena which occur in tetanus it would appear that the motor track itself of the spinal chord possessed two separate powers—a positive and a negative; that is, the positive being the power of contraction of muscles; the negative, that of their relaxation; for instance, if the extensor muscles contract, the flexors relax, and if the flexors contract, the extensors relax, showing an active and consenting function at the same time. In trismus, we find that those muscles of the jaw which shut the mouth are in a fixed state of spasm; no power can open it. The patient wills it, but the digastricus and other muscles which open the lower jaw cannot obey; try how he will, he cannot accomplish his object. This proves pretty clearly to my mind there are two powers. The one to keep the mouth shut, and the other to open it; that is to say, the power of the masseter muscle is increased in tetanus, while the antagonizing muscles are diminished, or have not strength to resist the action of the former. We see the same in opisthotonos; the muscles which keep the body erect, have an increased power, whilst those which bow the body forward have no control over the superior power, and cannot re-

sist the spasmodic rigidity of the former. In emprostotonos, those which bend the body forward are the strongest, proving that that point of the motor tract which supplies these muscles with nerves is most affected. It appears to me, therefore, in the natural function of the muscles, that when one set of them act, there is a consenting power in the opponent muscles to allow them to do so; for instance, when the mouth opens, which is performed by the digastricus and other muscles, the masseter permits it, and relaxes, and, on the contrary, when the mouth is shut, the former relax, and the masseter contracts, and so throughout the whole body. But we do not see this in tetanus; we observe an increased power in one set of muscles, while the others have none. It is evident, therefore, that the equilibrium of the two powers are not natural; the one is so great that the other is rendered quite ineffectual.

But, in speaking of the cause of tetanus, we must not forget the sympathy which must naturally subsist between the extremities of nerves and their origins; for instance, a worm in the intestines will so much irritate the extremities of the grand sympathetic nerve that it will produce such a state of diseased action at its origin as to induce tetanus. Again, if the tendons be wounded, they will do the same, they being the termination of muscles. In speaking of tendons we must recollect that each is the condensation of a whole muscle. Consequently, if one tendon, or more than one tendon, be lacerated, what a derangement must it naturally cause in the function of the spinal chord, which has been accustomed from the beginning of the formation of muscles to govern their action! The equalization of their movement, however, is broken; some muscles can obey, while others cannot. The regularity of their action simultaneously together is at an end, and their natural function is destroyed. That a sympathy exists between the tendons and the spinal chord there can be but little doubt; but what that sympathy may be it would be difficult to define; nor can we know the effect which might be produced on the grand nervous trunk or centre by the sudden loss of power of some of the parts which it has governed.

But, to continue the argument, we must go to the symptoms which appear in epilepsy, chorea, and other nervous affections. In epilepsy, it often happens that partial trismus is produced. There is gnashing, and sometimes a complete closure, of the teeth, but it is not permanent, as trismus is in tetanus; the jaw relaxes. In chorea, it is evident that portions of the motor tract are affected, but in what manner exactly we cannot tell. It would appear, however, that

the spasm of the muscles arose more from weakness than too much power. The very opposite occurs in tetanus to that which takes place in chorea. There is a confirmed spasm in the one, while in the other it is uncertain and unfixed,—a spasm more of weakness than strength. Perhaps the nervous influence to one set of muscles is not as strong as to the other, whereby their equilibrium is lost, and the balance of power between the two is unequal. The treatment of chorea proves to us that the disease arises from want of tone.

In addition to the discoveries of the late Sir Charles Bell, Dr. Marshall Hall has thrown considerable light on the functions of the medulla spinalis. He considers there is a reflex function in the spinal chord and its nerves, and in the parts they supply—that is to say, quoting his own words, “it acts in direct lines along the spinal marrow, and from the trunks to the branches of nerves, and from the muscles they supply;” and also, “it acts in reflex directions to and from the spinal marrow; that is, from peripheral, cutaneous, and mucous surfaces, through the spinal marrow, to the coordinate muscles, according to a newly discovered law;” also, “it acts in a retrograde direction along the spinal marrow:” but for more information on this subject, I beg to refer my readers to Dr. M. Hall’s Memoirs, in the Royal Medical and Chirurgical Transactions, Vols. IV. V. and VI., 2d series.

That in tetanus there is a reflected irritation there can be but little doubt; for instance, a boy receives an injury on the first joint of the great toe, as in Case IV. In seven days trismus supervenes. Here we see that, from the most remote extremity, the medulla oblongata becomes first affected, and produces a permanent spasm of the masseter muscle, so as to firmly and completely close the mouth. It would have been natural, the injury occurring in the foot, to suppose that the lower part of the spinal chord would have been first affected; instead of which, that part which is farthest from the seat of irritation suffers, and causes spasm of those muscles which it governs; consequently, the impression of the reflected irritation must have passed through the whole course of the spinal chord, before it reached the medulla oblongata, to have produced its morbid functions. It is a remarkable fact, that in true tetanus, from whatever part of the body the injury or irritation may be, that trismus is first induced, and so on downwards, gradually giving rise to opisthotonos, emprosthotonos, &c.

In all the researches in tetanus the absorbent system appears to have been overlooked. In hydrophobia, the symptoms of

which nearly correspond with those of tetanus, we know that it is caused by a certain morbid virus from the bite of a rabid dog, which becomes absorbed into the circulation. In many cases of this disease the absorbents can be seen in red lines in a state of inflammation. Mr. Abernethy, I remember, used, in his lectures, to speak of a remarkable instance—to hear so great a man relate a case was of the deepest interest. A man had been bitten in the hand by a mad dog, and Mr. A. watched the case. The absorbents gradually became inflamed in red lines up to the axilla. A basin of water was then shown to the patient, at which he expressed the greatest horror. His horror of fluids continued; he was convulsed at seeing them, and was never able to swallow. He died in three or four days afterwards. In some cases, however, the absorbents are not seen to be inflamed, and the disease does not show itself until months afterwards. Whilst I was house-surgeon to St. Bartholomew’s Hospital the following case occurred:—

A boy was bitten by a dog that was supposed to be mad, and it was killed. The wound healed, and nothing more was thought of it. In six months afterwards, however, symptoms of hydrophobia came on. He had the greatest horror of water, and was convulsed in the most violent manner if any attempt was made to make him swallow; he was thrown into convulsions even if a mirror was shown him. He died with all the symptoms of tetanus, opisthotonos being complete. In hydrophobia we know that tetanic symptoms are produced by a morbid poison being absorbed into the circulation. In tetanus we have no evidence of this; at the same time, however, there is a possibility that a wound of certain parts may secrete such virus that may be absorbed back into the circulation, and produce it. I am led to think this possible, because we frequently see inflammation of the absorbents from irritable ulcers; it is called irritation, but I very much doubt whether the ulcer does not secrete a morbid or acrid matter, which is taken up by the absorbents, causing their inflammation, and that of the glands connected with them. We know this to be the case in syphilis, in dissection-wounds, &c.,—there is a positive virus absorbed. I am not certain, therefore, whether some sores do not secrete an acrid matter, which sometimes is taken up by the absorbents; and although it may not be a specific poison, yet, from its irritating quality, it causes inflammation, and even abscess, in the gland affected by it. But if such should be the case in tetanus, and it is so in hydrophobia, the matter secreted and absorbed must be of so subtle a nature that it even does not cause inflammation of the absorbents as it passes through

their tubes or canals. That tetanus can be produced by certain poisons is a well-known fact; for instance, strychnine will produce it. Mr. Curling, after "the division of the medulla in the dorsal region of a rabbit, inserted this poison in a wound on one of the hind legs, and, in the struggles which preceded death, saw all the four extremities thrown into spasm." He quotes Professor Emmert, of Byrne, who saw the same thing from strychnine, and also found that the false bark of *Angustura* wood would produce universal tetanus if either administered internally, or introduced into a wound.

In the work of Mr. Blizzard Curling—a work of great labour and deep research, of the highest talent, and containing all the literature of this disease—it appears that every means have been taken to discover the cause of tetanus. The nerves of the injured part have been dissected, and they usually have been found inflamed and swollen; they have been traced, also, in some instances, up to the spinal chord, and sometimes along the nerves connected with the wound; the inflammation has extended, either in the substance of the nerve, or along its sheath, continuously, or in patches, up to the spine. The general opinion of those who have made these dissections is, that the nerves of the wounded part are more or less inflamed. M. Pelletier is of opinion that in all cases of tetanus the neurilemma of the nerves going from the injured part is inflamed, and extends on through their course to the medulla spinalis and its membranes, and he has adduced a few cases to prove this. Such opinions would be more tenable if these appearances invariably occurred, but in some cases no morbid change whatever of the nerves has taken place.

The brain has been minutely examined, but nothing more than a general turgescence of that organ and its membranes can be found, and frequently also engorgement of blood in its sinuses. The medulla oblongata, and the spinal chord, have undergone minute research, and upon the morbid appearances of these parts much difference of opinion exists. Mr. Curling and others are doubtful whether any change of structure or other lesions are invariably found. As far as my own experience has gone, there has been always an evident alteration of these parts, and I shall therefore at once proceed to those dissections I have seen, and of which I took notes at the time. Some years ago, a case of traumatic tetanus occurred in St. Bartholomew's Hospital, and I was present at the examination of the body. The brain and spinal chord were dissected. On removing the upper portion of the skull from the dura mater, that membrane was found to be in a high state of vascularity. The arachnoid membrane and the

pia mater were in the same state, and the vessels of the substance of the brain itself were tinged with blood. The appearance of the theca vertebralis also corresponded with the dura mater, and there was considerable effusion under it, and along the whole course of the canal of the spine—so much so that on removing the brain a great quantity of serum flowed from the foramen magnum. The vessels of the spinal chord itself, and the membranes which immediately surround it, were in like manner injected with blood. The dura mater was extremely turgid, and the arachnoid membrane and pia mater highly inflamed, with deposits of lymph upon their surfaces. The intestines, also, were loaded with fecal matter, and had an inflammatory appearance throughout their whole course. In the following case much the same appearances in the spinal chord presented themselves.

CASE I.—S. G., æt. 14, was burnt on the buttocks, back part of both thighs, and penis and scrotum, by his clothes taking fire while attending a brick-kiln. The injury was so severe as to produce the death of the integument far beneath the skin over the greater part of that surface. Considerable coldness and collapse took place immediately after the accident, from the effects of which he was rescued by warmth, brandy, and a large dose of opium. Sufficient purgatives were administered as soon as might be; at first, saturnine lotion, warm, and afterwards turpentine liniment, were applied to the wounds. He did not complain of extraordinary pain for some days, nor was there much excitement; a good deal of suppurative action, and some granulations, arose, and the discharge was copious and healthy.

On the evening of the 6th of May, he complained of some difficulty of swallowing, and considerable tightness and spasmodic contractions of the muscles of the left side of the neck; he was able to swallow then nearly as much as usual. Pulse 80; bowels open; tongue foul, and rather dry; pain of the wound kept him from sleeping last night.

A large number of leeches were applied to the spine of the neck and upper part of the back; large doses of calomel, and calomel and opium at bed-time.

On the following morning, after a tolerable night, the muscular contractions increased, and the head was forcibly drawn backwards, and to one side. Pulse 100; tenderness of the epigastrium from contraction of diaphragm.

On the next day everything worse. Pulse 140; more rigidity of muscles; jaws closed.

Repeated leeches, and cupping on the spine, and calomel and opium, persisted in.

In the evening the respiration had become

affected. Pulse 160 and 180, with occasional spasm of the long muscles of the spine, producing a degree of opisthotonos. Died at 11 P.M.

Section Cadaveris 12 hours after death.

External veins about the spine, particularly the cervical and dorsal portions, excessively loaded with blood, though the body had been for some hours on the face; dura mater of the chord of a darker purple hue throughout than natural, with vivid red blushes here and there; arachnoid membrane of cervical and upper dorsal part exceedingly vascular, so much so as to be quite red in places, and between these the vessels were numerous, long, large, and tortuous. No change could be perceived in the pia mater, but there was effusion of serum between it and the arachnoid membrane. On dividing the substance of the chord itself, the medullary matter seemed darker than usual, and the transverse sections exhibited numerous bloody points from the divisions of the turgid vessel which had pervaded it. In this case it is evident that the spinal chord and its membranes were inflamed, and that even the substance of the medulla spinalis was congested. The following is another case of the same description.

CASE II.—Thomas Billings, æt. 25, fractured the ring-finger of the left hand from a squeeze by a door. It occurred in the second phalanx, and was compound. The tendons and the integument were much lacerated.

On the eighth day he was seized with the following symptoms. He had tension and rigidity of the muscles of the neck and back, with slight but evident curvature backwards. There also was trismus, which, however, was not quite complete, as he could separate the teeth a little. There were slight spasms in the affected muscles. He complained much of a difficulty to expectorate, which was more distressing as there was a great secretion of mucus from the lungs. His deglutition was not at all impeded. His bowels were very costive, not having had a stool for four days. Pulse 110, full, hard, and incompressible; urine natural; breath foetid.

He was ordered—1 grain of calomel, and 8 grains of jalap, to be taken every three hours, and to have an enema containing four drachms of spirit of turpentine.

As the state of the finger was such as to preclude all possibility of saving it should the man recover, and as the amputating the injured limb has been advised by some, the finger was taken off at the second joint.

11 o'clock P.M.—The clyster returned

with a small quantity of hardened fæces. He said he was easier.

On the second day, at 7 P.M., the spasms were not so violent, but the rigidity and tense state of the muscles were still the same. He complained very much of inability to expectorate, and of sneezing, which he said prevented him from sleeping soundly. He had some tightness at the sternum. Had a copious foetid dark-coloured stool at midnight, and a scanty one afterwards. Pulse 115, and hard. Had taken four powders. They were ordered to be continued, and the turpentine enema to be repeated. At 2 o'clock P.M. had a stool after the enema, and was much better. Could open the jaw half an inch. Spasms rather abated.

A physician now saw the patient, and advised five grains of Dover's powder every three hours, and a common enema at night.

9 P.M.—The Dover's and purging powders had been exhibited regularly, but the bowels had not acted since the last report. Spasms were violent; other symptoms not altered.

4th day, 10 P.M.—No stool since yesterday morning. Pulse 120; symptoms the same.

A compound senna draught was ordered.

2 P.M.—No stool; symptoms gradually getting worse; great expectoration.

4th day.—All the symptoms much worse. He wishes to be left quiet.

9 P.M.—Opisthotonos and trismus complete. Pulse quicker, 140; great anxiety; no stool.

Turpentine enema and purgatives now ordered.

5th day, 11 P.M.—Spasms had increased in violence and frequency. The rigidity and tension of the affected muscles extreme. He was covered by a profuse perspiration, and was perfectly sensible.

5 P.M.—He had a tobacco injection, which returned immediately, and after this one composed of brandy. About 7 P.M. he died convulsed.

Post-mortem.—The theca vertebralis was greatly distended by a greenish fluid. The arachnoid membrane and pia mater throughout highly reddened, and upon the surface of the former were found, here and there, extensive patches of lymph, which had coagulated. The vessels of the spinal chord were extremely turgid, and a redness pervaded its substance not natural to this organ.

In this case, as in the last, the membranes of the spinal chord showed evident signs of inflammation and its consequences; and the substance of the medulla itself was more turgid and red than natural.

The case I am about to relate might be

termed arachnitis; that is to say, according to the view M. Ollivier takes of the disease. I have but little doubt that what he has termed arachnitis spinalis is the same as we term idiopathic tetanus. The only difference I can see is, that in true tetanus there are regular stages of the disease—trismus first, opisthotonos, &c.; while in arachnitis the disease originates at any portion of the medulla spinalis.

CASE III.—A man was admitted into the St. Marylebone Infirmary, who gave the following history of himself:—Two days previously he had been lying on his back on the damp grass, while at the same time the sun was extremely hot. In the evening of that day he felt himself very unwell, and went to bed early. On the following morning he found the muscles of the back, and on the posterior part of the neck, very stiff. The symptoms gradually increased until the day he was admitted into the Infirmary, when he was in the following state. He had pain in the whole course of the spine; his pulse was about 100, rather full and hard; the skin hot and dry; the tongue coated with a brown fur; he felt great thirst, and his bowels were costive; the muscles of the back and neck were rigid, and the whole spine was fixedly curved backwards. He was bled to syncope, and ordered five grains of calomel and twelve of jalap to be taken immediately. In the evening trismus came on, and he was seized with paroxysms of spasm; these continued all night, being unalloyed by opium, and on the following day he died.

Post-mortem.—On opening the spinal canal it was found that the arachnoid membrane was in some places reddened, and in others opaque; there was a deposition of lymph, of a tough consistence and a yellowish colour, on its whole surface; and in the centre of the dorsal region, about three inches in extent, blood, which was dark-coloured and coagulated, was effused. The whole canal between the arachnoid membrane and pia mater was filled with serum, opaque, and of a reddish hue, having been tinged by extravasated blood. Nothing remarkable was observed in any other part of the body.

The symptoms and morbid appearances of the following case very much resembled those of hydrophobia.

CASE IV.—On Nov. 10th, 1844, Thomas Smith, æt. 14, was admitted into the St. Marylebone Infirmary with an injury of the great toe of the left foot, which had occurred four days previously, owing to a fall from a horse. There was a deep cut immediately over the first joint, and the part was greatly swollen, and looking red. Leeches and poultices were applied, and the wound appeared to be going on well, when, on the seventh day, he complained of stiffness of

the neck, which he ascribed to a cold. On the following morning his mouth became quite closed, and trismus was complete, with a bending backwards of the cervical vertebræ. He could speak distinctly, although his mouth was firmly shut, but he could not swallow, for when an attempt was made even with a tea-spoon to feed him with milk, it was convulsively thrown back, as in hydrophobia; and he had a dread of fluids, endeavouring by his hands to prevent the nurse from attempting to pour them down his throat, and if persisted in it immediately caused convulsions. His pulse was feeble, and at 140; and there was a profuse sweat on the face.

An incision was made into the erysipelatous swelling around the wound, and blood and pus escaped. He was ordered—

Six leeches to be applied as near as possible at the entrance of the spinal chord, through the foramen magnum into the brain; and the extract of belladonna to be rubbed along the whole course of the cervical vertebræ, and to be frequently repeated. Also, a clyster containing spirit of turpentine and castor-oil of each half an ounce, and forty minims of tincture of opium.

R Hydr. Submur. gr. ij.; Pulv. Jalap, gr. vi. M. ft. Pulvis, in melle tertius horis sumendus.

R Tinct. Cannabis Ind. ℥xx.; Mist. Camphora, ʒj; M. ft. Haustus sextis horis sumendus.

None of these medicines could be swallowed.

He gradually got worse, but the convulsions were most severe. He was ordered a turpentine fomentation to the abdomen, and

R Acid. Hydrocyanici, ℥ij.; Sol. Morphiae Bicar. ℥xxx; Mist. Camph. ʒj. M. ft. Haustus, statem sumendus et repetatur quartis horis.

This draught was convulsively rejected. The breathing now became very difficult, and in twenty hours from the time he was first attacked he expired.

Post-mortem.—Nothing remarkable in the brain itself, but the base of the cerebellum, the tuber annulare, and the medulla oblongata, were much redder than natural. The spinal chord also, along the cervical vertebræ, was redder than it ought to be, but the rest of the medulla healthy. The arachnoid membrane of the base of the brain and spinal chord in the cervical portion injected with blood. There was inflammation of the trachea, of the larynx, and pharynx.

These cases, together with others I have seen, without taking notes, lead me to think that the motor track of the medulla oblongata, and spinal chord, are affected in

tetanus. I am borne out in this opinion by other writers. Dr. Reid has written a treatise on tetanus, and has detailed cases where the morbid appearances of the spine were similar to those I have just mentioned. He also mentions another case, where the spinal chord was equally affected. "There was a great quantity of water found between the vaginal ligament and dura mater, and a considerable quantity also was effused between the latter membrane and the pia mater. Inflammation also existed in many parts of these membranes." In a paper in the *Edinburgh and Surgical Journal*, written by Dr. Saunders, there are some very interesting and satisfactory remarks on this disease, and the spasm of muscles. They are as follows. "That if any muscle, voluntary or involuntary, is affected with spasm, and during this affection the person dies, on examination it is found that the nerves which supply the spasmed muscle are covered with turgid red vessels at their visible origins, or where they appear to set off from the brain, medulla oblongata, or spinal marrow." These appearances, he remarks, invariably occur more or less according to the violence of the affection; that the nerves supplying those muscles which are not affected are perfectly healthy. When speaking of tetanus, he makes the following observation. "If the tetanic affection is confined to the jaws, certain nerves arising from the tuber-annulare and medulla oblongata are found in the state above described; but, if the tetanic affection involves the whole inferior extremity, and the trunk of the body, as well as the jaws, then the origins, from the tuber annulare to the cauda equina, are covered with turgid, or red vessels. In short, the nerves exhibiting such turgescence at their origins, correspond in number and situation with the muscles that have exhibited inordinate spasms or contraction." These investigations were carried on by Dr. Saunders for no less a period than sixteen years, and he did not meet with one exception. In the *Medical Repository*, a periodical which is now defunct, my late much esteemed friend, Mr. T. Brayne, of Banbury, a gentleman of the highest professional talent and character, published some most interesting dissections of two cases of tetanus which fell under his observation. From these dissections, he made two beautiful drawings, and from which a plate was struck, accompanying the history of the cases. In one case was observed a very turgid state of the venous system of the spine throughout its whole extent, in many parts approaching to purple. The arachnoid membrane also was in its whole extent much more vascular than usual, gradually increasing to redness, from above downwards. In the other case, several

inches of the spinal chord were studded with laminated depositions on the arachnoid membrane, and all the vessels of the pia mater were very turgid and tortuous. In the museum of St. Thomas's Hospital there are two or three preparations of the spinal chord, where the arachnoid membrane is covered with flakes of bony matter, and Sir Astley Cooper informed me that the patients from whom they were taken died tetanic.

It is a well-known fact that horses are extremely liable to tetanus, and it may be interesting here to show the analogy which subsists between the human subject and this animal in this disease. Mr. T. Brayne had the opportunity of opening the spinal canal of a horse which died of traumatic tetanus; the arachnoid membrane of the whole spine, but more particularly the cervical and dorsal portions, were inflamed, but there were no depositions upon it.

That irritation and pressure on the spinal chord will produce rigidity and spasm of the muscles, has been shown by Dr. Wilson Philip. In an experiment he made on the spinal chord of a frog, by applying strong stimuli to it, he found that strong and repeated contractions were excited in the hind limbs as long as the stimulus would produce the effect. He also proves this by other experiments, but in one more particularly than in any, where he mentions one form of the disease, *opisthotonos*. His words are these: "The convulsions excited by opium always assume the form of *opisthotonos*. The animal becomes rigid, and is bent backwards. During the intermission of these convulsions the slightest touch renews them. If the animal is allowed to remain undisturbed, they but rarely occur. By frequently touching it a constant succession of them may be kept up." Such an experiment as this cannot be considered any other than satisfactory.

As yet there does not appear to have been any fixed principle of treatment of tetanus; one plan has been pursued by one individual, another by another, without any particular reason being assigned for it. Hence we see that bleeding to a large amount has been adopted, amputation of the limb, division of the nerves, cold affusion, vapour and warm baths, and counter-irritants employed. Numerous remedies also have been administered, such as purgatives of every description, mercury to salivation, opium, and other antispasmodics. The tincture of Indian hemp, (tobacco and turpentine, in injections), antimony, carbonate of iron, hydrocyanic acid, tonics, and stimulants, with a host of other remedies too numerous to mention.

Among the most rational treatments that have been adopted, is that by Mr. Abernethy, and which was founded upon prin-

ciple. He conceived that the disease arose from a peculiar state of the digestive organs, and that the secretions were not natural, being more like sloughs or pitch, than healthy feces. For this reason he formed the idea that if the alimentary canal could be gradually evacuated of its contents, the disease would disappear. With the view of effecting this, he prescribed one grain of calomel, and six grains of jalap, to be taken every three hours. This powder was mixed in honey on treacle, and smeared, as well as the closure of the teeth would permit, upon the back part of the tongue, and it became gradually swallowed. The bowels at length acted, and the treatment was continued as long as any tetanic symptoms remained. Having been Mr. Abernethy's pupil, his dresser, and afterwards his house-surgeon, I had frequent opportunities of witnessing the treatment, and, in many instances, it succeeded. It may perhaps be interesting here to relate from memory some of the cases.

A man was admitted into St. Bartholomew's Hospital, under Mr. A., with a compound fracture of the metatarsal bone of the great toe. In seven or eight days afterwards trismus came on, with stiffness of the muscles of the neck, and at the root of the tongue. His bowels were very costive. He was ordered one grain of calomel, and six of jalap, to be taken every three hours. On the following day he was better, but his bowels had not acted. The next day he had one or two copious motions, quite black, with a very foetid smell. In the evening he felt somewhat better, but the trismus remained. The treatment was continued, and the bowels began to act freely. The day following he could slightly open the mouth. The calomel and jalap were steadily persevered in. Day by day he got better under the treatment, and in a week or ten days the tetanic symptoms had quite left him. In another case, a man met with an accident, and smashed his hand, and the tendons were considerably lacerated. In a few days trismus occurred. The mouth was completely shut, and he had stiffness at the back of the neck, and at the root of the tongue. He was treated exactly as in the last case. The bowels were copiously relieved; the jaw relaxed, and, at length, the tetanic symptoms disappeared. In a case of compound dislocation of the ankle-joint trismus came on about the usual period. The patient was ordered calomel and jalap in the same proportions every three hours. In three days after the bowels had been copiously relieved the symptoms had begun to abate. In six days the mouth could be opened and shut naturally. I remember a case in which Mr. Abernethy was particularly interested. He saw the patient three or four times a day, and even witnessed the

administration of the medicine himself. The man had met with a lacerated wound of the foot. In a few days after the accident he was seized with trismus, and was threatened with the worst symptoms. It was a long time before the disease yielded, (six days) and opisthotonos had commenced. The same treatment as in the former cases was strictly pursued, but the bowels did not act for four days. They were at length copiously relieved. On the sixth day some movement of the jaw took place, and the patient from this time gradually recovered. During the period of four years eight patients under the care of Mr. Abernethy recovered from tetanus, being treated upon this principle. These cases show us the very great importance of administering purgatives, and clearing the alimentary canal in this disease. Without doing this first, any other remedies we employ have but little chance of having any effect in relieving the disease.

Nothing, perhaps, has tended more to promote the proper treatment of diseases than morbid anatomy, nor can we, I think, form any true criterion of their real nature, without having recourse to it. For this reason, therefore, I feel convinced that unless we at once go to the seat of the disease in tetanus, we have but little rational hope of relieving it. It is evident from the dissections that have been made after death of these cases, that the spinal chord and its membranes undergo a morbid change, and also the medulla oblongata, and sometimes the brain. We find on opening the spinal canal that it is usually filled between the arachnoid membrane and pia mater with fluid, and that there are depositions of lymph upon the former membrane, with apparent marks of inflammation on its surface. This can be traced, usually, along its whole course up to the medulla oblongata, where it joins the tuber annulare. The substance of the spinal chord itself, also, has an appearance of being redder than natural in most cases; but our knowledge of its structure both in health and disease is so limited, that it would be difficult positively to say that it was inflamed, although there is every appearance of it. It is only to be hoped, that, as our knowledge of microscopic observation increases, that we shall discover the more minute structure of these textures.

From the evidence I have brought forward it appears to me that our treatment of tetanus ought to be more especially directed to the spinal chord and its membranes. The arachnoid membrane and pia mater of the spine are as delicate membranes as the iris of the eye, and there appears to me to be a great analogy between them. The iris, when inflamed, deposits lymph upon its surface, and the arachnoid membrane does the same, secreting likewise a serous fluid.

In *iritis* it is of the greatest importance that the lymph should be immediately absorbed, or it would become organized and destroy vision. With the view of promoting the absorption of the lymph, we prescribe calomel and opium at stated intervals every four or six hours, and it is gradually taken away by the absorbents, and the iris is left free. The same principle of treatment might be adopted in tetanus. There is an effusion of serum between the arachnoid membrane and the pia mater, and lymph is deposited upon the former. Mercury, administered in the same manner as in *iritis*, might be the means of promoting the absorption of the fluid and lymph, and curing the disease. Mr. Abernethy considered that his treatment was "by gently exciting the bowels to action by repeated small doses of purgatives," and he appeared to have overlooked the effect of the mercury. If a grain of calomel be taken every three hours, and continued for four or five days, there can be but little doubt that it would enter into the system, and gradually cause absorption from the arachnoid membrane, in the same manner as it does in *iritis*. I am inclined, therefore, to think, that the good effect derived from Mr. Abernethy's treatment in tetanus was not only from the purgative, but from the mercury also bringing the absorbents into action, and thus not only removing the cause of the disease, but preventing at the same time its further progress.

I am aware there has been a very great prejudice in the minds of some practitioners against the use of mercury in this disease, but I suspect, when such has been the case, that it has been improperly employed; for when *ptyalism* is spoken of, it proves that it has been given to a greater extent than it ought to be. Mercury administered upon principle, and merely given as a remedy without principle, is very different in its action. In the one it is employed for a particular reason, while in the other no cause can be assigned; consequently, the employment of it fails. If mercury be taken in large doses, and rubbed in, it produces *ptyalism* too soon, and does harm; but if it be given in moderate doses, and at stated intervals, it acts equally, and, by so doing, gradually overcomes disease. The misemployment of it is too frequently the cause of its failure. The morbid appearances seen in tetanus certainly favour its exhibition on the same principle as in *iritis*.

But one of the principal symptoms of tetanus is, violent paroxysms of spasm, and to subdue these is of the greatest importance, for, in one of these, the patient usually dies. For this purpose many remedies have been employed; opium has been given to a great amount, and, certainly, with more benefit than any other remedy. In a table made by

Mr. Blizard Curling, of 128 cases, about 60 patients recovered. Out of these, 45, and more, took opium, combined with other remedies; others antispasmodics, such as aether: musk, conium, camphor, digitalis, hydrocyanic acid, &c., have been employed, but with so uncertain advantage that they cannot with certainty be relied on. There has of late been a new remedy introduced from India—the extract of Indian hemp, or *extractum canabis sativa*, which has been discovered to have a powerful effect in allaying spasm. Dr. O'Shaughnessy first introduced it into European India, finding it a powerful antispasmodic, and, more particularly, in tetanus. Mr. Lee, late of Crawford street, was, I believe, the first who tried its effects in this country; since which, my colleague and friend, Dr. Clendinning, has written a very able and interesting account of it in the Transactions of the Royal Medical and Chirurgical Society, (Vol. 8, second series), and its virtues. It appears that it has the same good effect as opium, without its unpleasant consequences, and when opium and its different preparations will not, the tincture of indian hemp does succeed.

The spasm in tetanus is sometimes so violent that it is necessary the patient should be held by three or four individuals. In such cases, and indeed I should recommend it in all others, I have employed the extract of belladonna rubbed along the whole course, and on each side of the spine, with the greatest advantage. The spasm, as soon as the belladonna acts, ceases, and does not return while the patient is kept under its influence—at least in the only three cases I employed it in it did not. In the one, the patient was seized with traumatic tetanus, and there was trismus and opisthotonos, accompanied with such severe spasm of the whole trunk and limbs that four persons could hardly hold the patient in bed. The extract of belladonna was rubbed along the whole course of the spine on each side, and in half an hour afterwards the spasm had entirely ceased; the patient could open the mouth, which before was firmly closed, so as to admit the fore-finger between the teeth, and the opisthotonos was greatly relieved. The belladonna was washed off, and fresh was reapplied every three or four hours, and for seventeen hours the patient was perfectly tranquil. It unfortunately happened, however, that, from the large quantity required to be used, the supply of it failed about two or three o'clock in the morning, and before any more could be procured, five or six hours having elapsed, the patient was seized with another paroxysm of convulsion, of which she died.

In the second case, which occurred more than twenty years ago, there was violent spasm of the trunk, with opisthotonos. As

soon as the belladonna was applied the spasm ceased, and the unfortunate patient died without pain. In a third case, (No. 4), which I have related in this paper, no paroxysm of spasm occurred, but the patient died of inflammation of the trachea and larynx and pharynx, as in hydrophobia. In speaking of this remedy, however, I only offer it as auxiliary to the other means recommended. It appears to me that if the spasms could be prevented or quieted, that it would give time for the treatment employed to produce the proper effect, and also might be the means of preventing the sudden death of the patient.

Venesection has been recommended in tetanus, and certainly in some cases it appears to have been attended by benefit. Bleeding, judiciously employed, in the first stages of the disease, I have but little doubt would tend to diminish the violence of the spasm; but in the latter stages it would rather assist than diminish the fatal termination. Amputation has been proposed, and in some instances adopted, but the success is very doubtful. A case or two have been recorded where it has appeared to succeed in gun-shot wounds, but in others no advantage whatever has been derived from it, as may be seen in Case II., which I have here related. In some cases, also, the nerves going from the injured part towards the spine have been divided, and with apparent good effect. If the injury causes tension of the nerves, this operation, by relieving irritation, might be beneficial; but usually the disease is too deep-rooted on the motor tract of the spinal chord to be affected by any local treatment.

Cold affusion has been thought highly of by some, but it has been chiefly used in hot climates, and the patients mostly have been negroes.

In concluding these observations, it is evident, to my mind, that tetanus is a permanent disease on the motor tract of the medulla oblongata and spinal chord, brought on from some distant reflected local irritation. The treatment of it, therefore, ought to be directed accordingly, and the following means are those which I think are the most advisable to be pursued:—

1st, If the patient be plethoric, one general bleeding from the arm might be had recourse to, according to the violence of the symptoms.

2d, Leeches might be applied along the whole course of the spine, and more particularly at those spots where the muscles were most spasmed.

3d, The extract of belladonna might be rubbed on each side of the spine, and more particularly at the spasmed portions, whereby the paroxysms might be prevented.

4th, Purgatives might be administered,

and the contents of the alimentary canal evacuated gradually, as recommended by Mr. Abernethy, by giving doses of calomel and jalap every three hours, and if that should be not active enough, one drop of croton-oil.

5th, When the bowels had been sufficiently relieved, then calomel and opium might be prescribed as for iritis, and persevered in until the mouth became sore.

6th, Should the disease become chronic, counter-irritants might be employed, such as blisters on each side of the spine.

7th, Should the paroxysms of spasm be very violent, Opium, the Tinct. Canabis Sativa, or the Extract of Belladonna, or any other antispasmodic, might be exhibited internally, according to the best judgment of the medical attendant.

8th, Soothing remedies might be employed to the wound, such as a strong solution of opium, hyoscyamus, poultices, &c.

9th, If there be tension of the nerves they might be divided. And

10th, Should there be a peculiar state of the wound, causing more than ordinary irritation, or should it be impossible to save the limb, then amputation might be performed.

The above principles of treatment appear to me to be the most rational methods that can be adopted for the relief of tetanus. It is not impossible that at some future period some discovery will be made to cure it, but until that happy time arrives it is our duty to pursue the most likely means of overcoming this most dreadful disease.

APPENDIX TO THE ESSAY

ON

DISEASES OF THE NERVOUS SYSTEM:

CONTAINING NOTES OF THE LECTURES OF
THE LATE PROFESSOR GREGORY,
OF EDINBURGH.

BY EDWARD BLACKMORE, M.D. Edinb.

Member Extraordinary of the Royal Medical
Society of Edinburgh, and Physician to
the Bath Penitentiary.

[Continued from page 925.]

On Insanity.

THE various disorders included by Cullen under the insane affections, are Oneirodynia, Amentia, Melancholia, and Mania.

1. Dreaming, frightful and oppressive, with groaning, from a sense of weight on the breast. People in dreams fancy they see or hear what is not to be seen or heard. It is not from an organic affection; it all comes in a

quarter of an hour, or in a minute. The function of the brain is irregular; there is no commanding of the imagination; the usual association and relations of ideas are lost; yet some persons have power over their thoughts in the disturbed sleep that attends dreaming. Dr. Reid, when young, used to dream frightful dreams; he resisted it, and got the better of it, having fixed it in his mind that he never had been in real danger. Once he dreamed he was on the brink of a precipice, made a bold effort to throw himself down, and awaked and did not dream again for forty years. On a blister being put on his head some years afterwards, he dreamed he had fallen into the hands of savages, who scalped him.

Dreams may often be referred to a cause, producing imperfect or disturbed sensation. We can trace them to external impressions, or to a state of the internal organs; this impression or sensation makes the beginning of a train of thought, which goes on. Once, on putting hot water to my feet, I thought in my dream I was ascending Etna, and that travellers who spoke of snow on the mountain were liars. Having been once on Vesuvius, where I felt the ground hot under my feet, the hot water brought to my recollection Mount Etna, Brydone's account of which I had been reading. Once also, from cold in the night, I thought I was in Hudson's Bay. The most common cause of this dreaming is the habitual use of strong liquors, or a heavy supper.

There is a wonderful rapidity of thought in dreaming: a dream of a number of particulars will be included in a minute. One thought he had enlisted for a soldier, deserted, and was taken, tried, and shot, while a door was opened and shut violently.

2. Idiotism, an inability to perceive the relations of things. All persons are idiots in early infancy; intellectual power is gradually acquired. A certain tone of the voice, in childhood, may indicate that one will never arrive at maturity of judgment. In the progress of life, also, we approach to amentia; some retain their faculties perfectly to the age of 90; others lose them before 60.

Idiotism is seen also in a loss of memory. Memory is the foundation of our judgments. In senility common occurrences are little attended to, and

are soon forgotten. "No old man," says Cicero, "ever forgot where he had laid his money!" The habit of mental inattention influences the memory; and so does the state of the brain. Loss of memory supervenes on fever, and it arises also from emotions of the mind, and excessive venery. A stupid fellow is said to have had a blow on his head, and to have become clever; another blow brought back his stupidity.

3. Melancholy, a fixed idea, an erroneous notion; as in the case of one thinking his affairs are going to ruin, and that he will be reduced to poverty. Some think they are eternally damned. Simon Browne thought his soul was taken from him, and that nothing but animal life was left him; he dedicated a book of great talent to the Queen, and begged her intercession with God. Some fancy they are turned into a horse, dog, or wolf. One thought he had no head; a box on the ear cured him. Others have a distortion of the mind, anxiety about their health; such have often the melancholy temperament, but not always. I have seen this sort of low spirits in the sanguine temperament; and it is not always connected with dyspepsia, although Cullen thought otherwise. Persons are insane on one topic, and rational on others. The monomaniac is not always melancholy; some are in high spirits, in imagined prosperity, while their affairs are going to ruin; or believing themselves "elect," and sure of salvation. Don Quixote was mad on one subject, that of knight-errantry; another is mad on the plan of guiding an air-balloon, or on politics, or on acquiring money. In all it is an erroneous notion, thinking something to be done or intended, without just reason for thinking so. Some shew a tendency to wander about; many have a disposition to suicide; if I hear of such, I say, "I am glad of it; it is better than murdering another."

4. In mania there is not the usual train of thought, nor a command of thought; it is styled mental derangement, disorder of the mental function. Some are bent on one particular thought; there is a look of horror in the countenance, a preternatural rapidity in the succession of sensations and perceptions. What is the train of thought it is difficult to understand; how it is produced we know not. A

sound state of the bodily organs is essential to a command of thought. It requires an effort to keep up muscular contraction, and also to fix the attention. A person in mania has violent keenness of thought, extraordinary muscular strength, and capacity of enduring fatigue and hunger and cold; and the insane will take an immense quantity of purgatives and opiates to affect them in the usual manner; one took twenty-eight grains of tartarized antimony with little effect on the stomach.

You must observe the least deviation from the natural state of the mental functions.

Mania is produced by moral causes, as emotions of the mind, grief, anger, fear, joy; many people were said to have come to Bedlam from the sudden acquisition of wealth, that is, from joy. In one family a daughter was found exclaiming, "My mother is wrong; I am the only one in my senses." She was raving, with a bell in her hand. The mother also was mad; the youngest daughter also died raving mad. The exciting cause was the acquisition of wealth; they had been in poverty, and on a fortune coming to them, all went mad. The mother languished, and died in a few months; the eldest daughter came to her senses, and married; her husband lost the fortune, but she retained her senses and composure of mind. Some women go mad on their approaching nuptials with men of their own choosing. Writers speak of religious madness, that is, madness from the excitement of religious controversies; others are mad from the love of projects.

The exciting causes are also—*a*, Strong liquors; and there is a modification of the insanity from the different kinds of liquors, as a vivacity from wine, cruel ferocity from distilled spirits, and heaviness from porter. The most ferocious drunkenness is said to arise from port wine mingled with brandy. *b*, Narcotics, as opium, stramonium, conium. Opium occasions in some persons disturbed dreamy sleep, and mental derangement rather than sleep. A lady, to whom I thought of giving an opiate, said it always disagreed with her. I gave it, and she became delirious for three days. I have found some become maniacal after the large use of mercury.

Mania is also connected with various bodily disorders, as—1. Obstructed menstrua, and the consequent determining of blood to the head, and increase of irritability. 2. The state of pregnancy. 3. The child-bed state. 4. The drying up of ulcers, and the suppression of habitual discharges. 5. Fever, the delirium of which is sometimes continued for a very long time. 6. Inanition, from want of diet, and from other causes of exhaustion.

There is a predisposition which is hereditary; madness is observed running in families for generations.

The disease is styled mental derangement; but there must be something wrong in the bodily organs. The intellectual functions are performed by the bodily organs, as much as the senses of hearing and seeing; of the connection of the latter with the organs we know something; of the former, nothing. Mania is always, however, a corporeal malady.

Various morbid states of the brain are often discovered; how these produce the disease we know not. Extravagant hypotheses have been put forth on the cause of mental derangement; such as the jargon of Boerhaave about black bile, which he got from the ancients: hence melancholy was thought to be cured by purges, to carry off this bile. The bile may become black, but what is so called is generally blood. The speculations of Dr. Cullen about extraordinary or unequal excitement and mobility of different parts of the nervous system, is as visionary as the theory of black bile. All we know is, that high excitement of the nervous system is connected with mania, and that it is useful to lessen this excitement. I have no conjecture on the state of the brain adequate to make a person insane on one topic, and rational on all others. It is in some cases connected with inflammation, or irregular determination of blood to the head; and in others with a different state, a state of inanition, and a peculiar state of the nervous system, not dependent on the vascular state.

The Treatment.—Bleeding will sometimes remove maniacal symptoms.

Purges are the most ancient and the best practice; they lessen the flow of blood to the head. Some physicians think more good is done by mild purges, as tartrate of potass; the stronger also,

as calomel and jalap, are good. When large doses are inoperative, an opiate has made a small quantity effectual.

As habitual full living has led to mania, you give in such cases a cool spare diet.

I have found the disease attended with signs of inflammatory action; and the blood drawn in recent cases is buffy: this is a strong argument for low diet and evacuations, which do good almost universally in sanguine temperaments. In some cases bleeding *ad animi deliquium* may be tried, and you may open the temporal artery; or moderate bleedings from the arm may be better. Remember, that by this treatment you may also produce permanent imbecility instead of the mania which shall have passed away. In some states of the disease a cool spare diet is absurd; you must attend to the accompanying state of the constitution, and to the exciting causes of the malady, in order to determine the treatment.

Shaving the head is often good; you can then apply cold to it by wet cloths, or the clay cap, or a bladder with snow or ice in it, which is excellent, and generally better than a blister. The pediluvium, or a warm bath, while cold is applied to the head, may be of service; but the stimulus of a great degree of heat would be hurtful. Plunging into cold water, or the sea, and keeping the patient as long as possible under the water, without danger to life, is recommended by Boerhaave. There are striking instances of maniacs bearing cold, and showing the effect of great cold in curing mania; one wandered in the night in Russia, when the cold was at 69° under the freezing point, and was cured.

I object to emetics. I know not on what principle vomiting has been recommended; experienced people rather condemn it.

Blistering the head or neck may be good; sometimes it has done harm; and blisters to the legs, on the principle of revulsion, is foolish.

The strait waistcoat is necessary. You must restrain the patient from doing violence. In many cases more good is done by restraint than by all the medical treatment. It is injurious to tie them down with cords; they have torn their own flesh, and broken their bones. In Italy they secure the hands

to the sides; it is strong coercion, and will counteract the ferocity of the patients. Never allow them to wander about; confine them in a state of safety; let them walk in a garden with a high wall. To keep the patient in his own house is the worst thing of all; he must not have people about him whom he has been accustomed to see, and over whom he has had authority; he must be placed in the hands of strangers. You must get a seclusion, a retreat for them; one was always mad in a concourse of people, and in his senses while in his workshop; another was sane while in an asylum, yet retained as incurable, because on going home he became turbulent; a third would show irritation when visited at the asylum, and by keeping him quiet he was cured; another, who had been furiously maniacal, recovered from the change of scene and varied occupation of mind in a long journey.

Severity, as scourging and blows, must never be used; that would increase the ferocity. You must give a new turn to their thoughts, and assist them to recover the natural command of thought. Maniacs are capable of exerting command over their thoughts: observe their cunning; this is *ipso facto* a command over their thoughts. They will suppress all appearance of their derangement, and on getting their liberty they will relapse.

Some have been cured by constant labour. One used to cure his patients by employing them as his farm cattle; he put them in harness, and made them plough. He used to walk out with a new patient, pick a quarrel with him, and beat him unmercifully; then he said he was successful. Never be cruel or harsh; only use restraint.

Opium is given; it relieves the high irritation and want of sleep. One patient, when maniacal, took two hundred drops of laudanum; slept, awoke, and continued well. You may try a full dose, and repeat it until the effect is obtained. In some cases it has done harm. Valerian is insignificant. Camphor I have no faith in; I have never known satisfactory evidence of its being of service.

We have very imperfect testimony of the good or bad effects of a variety of treatment in this disease. In recent cases an active treatment is more necessary; and in long cases we should

not despair. Endeavour to change the train of thought by regimen and moral management. More good, in such cases, is done by attending to the state of the mind, than by the most powerful physical remedies; but you should employ both methods.

The hope of recovery is generally unfavourable; there is a strong tendency to a renewal of the disease. The morbid action, the essential part of the malady, comes in paroxysms; and although there are lucid intervals, it is often connected with some organic affection of the brain. The older the patient the less is the prospect of recovery; of the young, two-thirds have been cured; of those between 50 and 60, one-sixth only.

CLINICAL OBSERVATIONS ON SURGERY.

By R. H. MEADE, Bradford, Yorkshire.

(For the *London Medical Gazette*.)

I.—*Cases of severe injury, accompanied with very slight constitutional disturbance.*

It has often been observed, that when persons meet with very complicated injuries, they frequently recover with surprising rapidity, and suffer from less constitutional and febrile irritation than commonly occur after more simple accidents. It seems that in very extensive injuries, where several distinct parts of the body are hurt at the same time (when the shock is not so great as to destroy life before reaction takes place, and in which no internal and vital organs are seriously injured), the injury in one part acts as a check upon that in another, producing a sort of counter-irritation, which keeps down violent inflammatory action, and sympathetic fever. Whether there is any truth in this idea, or the effects have been merely accidental, I will not pretend to decide, but will relate one or two cases that have occurred in my own practice in illustration of the point.

In the evening of the 1st of November, 1843, I was sent for to see a strong robust man, named William Priestly, aged 42, who had met with a severe accident while sinking the shaft of a coal-pit. He was engaged with another man in blasting some hard rock with gunpowder, when the charge

accidentally exploded before he had time to avoid its effects. His companion escaped almost unhurt, being merely a little burnt about the face, but I found the poor fellow himself in the following state:—Both hands were completely shattered; the fractured extremities of the radius and ulna were exposed on one limb, and only remained attached to a few blackened fragments of the wrist and hand; while the mutilation of the opposite limb was not much less. The integuments of both arms, as high as the elbow, were much lacerated and burned; the skin, and in many places the cellular tissue beneath it, being infiltrated with dirt, fragments of stone, and gunpowder. The head and face were much injured. The features were so blackened and cut that it was difficult to recognise them. Sight appeared, at first, to be totally destroyed, the sclerotics and cornea of both eyes, as well as the lids, being extensively lacerated with fragments of stone, and blackened with gunpowder. On separating the lids the man could see light with the left eye, but the sight of the right was quite gone. Vision was probably destroyed at once by concussion of the retina, as the globe of the eye was not apparently penetrated by any of the wounds on its surface. There were several wounds in the scalp, and one deep cut on the front of the left leg.

As soon as he had rallied from the immediate shock of the accident, which was about three hours from the time that I first saw him, I amputated both arms below the elbow by the circular operation, leaving the stumps as long, and saving as much of the skin, as the injured state of the soft parts would allow. I then cleansed the lacerated and burnt integuments, and brought them together, so as to make two very good stumps. I put two or three sutures in each, and dressed them with spermaceti cerate. The burnt state of the skin precluded the use of adhesive plaster. He was now put to bed; his face and eyes were washed, so as to remove as many fragments of dirt and stone as possible, and a soft thin bread and water poultice (confined in a bag) was applied over the whole face. His other wounds were dressed, and I ordered him an aperient mixture to take every few hours.

He recovered without a symptom of

constitutional disturbance. The stumps united with rapidity; one was quite well in a fortnight, and both arms were completely healed in three weeks.

His chief sufferings arose from the injury to the eyes; considerable inflammation occurred in both of them, affecting all the external proper tunics, and being very protracted in its course. In the right eye, matter formed in the interior chamber, and between the layers of the cornea, and complete disorganization of the globe took place. In the left, very considerable inflammation of the cornea and sclerótica occurred, extending to the iris, which required for its removal the repeated local abstraction of blood, and the long-continued administration of mercury, so as to keep up a slight affection of the mouth. He ultimately recovered the sight of this eye, though it still remains very imperfect in consequence of opacity of the cornea, owing, in a great measure, to the presence of particles of gunpowder which are imbedded in its substance.

CASE II.—I met with a very similar case to the last during the preceding year. On the 1st of October, 1842, I was called to a man named John Wilson, who had been injured in precisely the same manner while sinking a coal-pit. He was a strong healthy man, about 45 years of age. His left arm and hand were so shattered that amputation of the limb was obliged to be performed a little below the elbow. The thumb of the opposite hand had also to be removed at its articulation with the metacarpal bone, in consequence of its having sustained a compound fracture with dislocation. One eye was destroyed, there being a penetrating wound of the globe; the scalp and face were extensively lacerated, and there was also a severe compound fracture of the left leg a little below the knee.

This man recovered without any febrile disturbance, or disorder of the general health. The stump rapidly healed, and the wounds on the head and leg soon closed. His chief sufferings (as in the former case) arose from the injured eye. Chronic inflammation of all the tunics occurred, which terminated in suppuration and collapse of the globe. His complete recovery was also retarded for some time by want of union between the bones of the

fractured limb. The external wound soon healed, so that it became a simple fracture; but it was necessary to continue the use of splints for nearly three months before union became firm. It seemed a consequence of the complicated injuries under which the man was suffering, that there was not sufficient vigour in the constitution to effect union between the fractured bones.

II.—*Case of recovery from a severe injury to the head, with suspected fracture of the base of the skull.*

William Wilson, about 35 years of age, a workman at the Low Moor Iron Works, was knocked down, on the morning of the 24th of May, 1844, by a violent blow from a heavy piece of iron, connected with some machinery, which swung round, and struck him on the right temple. I saw him about an hour after the occurrence, and found him labouring under severe symptoms of concussion of the brain. He was nearly comatose, being insensible to anything that was said to him, but very restless, and capable of articulating a few incoherent words. He was cold and pale, and had a very small, but a slow pulse. He had vomited several times, both on the road, and after he got home, and continued to do so while I remained with him. The contents of his stomach consisted almost entirely of blood, in a pure and partly coagulated state. Suspecting, from the appearance of the blood, that it must have been swallowed, and finding that the man had received no injury on any other part but the head, I examined the fauces, and found that the blood was trickling down the back of the pharynx, and evidently proceeded from the rupture of some vessel at the base of the skull, and passed down the œsophagus into the stomach. On examination of the head, the only external injury that could be found was a small contused wound on the right temple, a little above the upper edge of the zygoma, from which some blood was oozing. On introducing a probe, it passed through the temporal muscle, and I could feel the bone rough and denuded of its periosteum beneath, but I could not satisfy myself whether there was any fissure or crack; and the wound was not sufficiently large to admit of the introduction of the finger.

Diagnosis.—Judging from the symp-

toms which I have detailed, I suspected that there must be a fracture extending from the temporal fossa downwards to the base of the skull, and I accounted for the hæmorrhage by supposing that there was laceration of some of the vessels or sinuses at the base of the brain; for the blood to find its way into the pharynx must either have escaped from some vessels external to the skull, or have found its way through a fissure in the bone. The bleeding appeared to be analogous in character to that which is so commonly observed from the ears in cases of fracture of the base of the skull.*

My *prognosis* was of course very unfavourable, as I expected effusion of blood would probably take place within the cranium, as well as externally, and produce pressure on the brain; complete coma and death.

Treatment.—The man being in a state of collapse I did not venture to bleed him, though a modern writer, of no mean pretensions,† encourages the practice of taking away blood (in some instances) from the arm, “at the earliest period possible” after concussion of the brain, without reference to the state of the pulse. I ordered him to be kept as quiet as possible in bed, warmth to be applied to the extremities, a little warm gruel to be given him at intervals, if he could swallow it, and a bread and water poultice to be applied over the bruise on the temple. I also prescribed (chiefly as a placebo) an aperient mixture containing a little sulphate of magnesia, which was to be given him every hour.

In the evening I sent my assistant to see him, with directions to bleed him if reaction had taken place. He found him lying in a state of nearly complete coma; the vomiting had ceased, and also the bleeding in the throat. His skin was warm, and his pulse had risen considerably both in frequency and fulness. Under these circumstances he took about ʒiij. of blood from his arm, and directed the friends to continue the aperient mixture (some of which he had swallowed) during the

night. On the following day I found him much the same, still insensible, but breathing naturally, and with a full pulse. I repeated the bleeding from the arm, and ordered some leeches, and afterwards an evaporating lotion to be applied to the temple, which was now considerably swollen and inflamed. He slowly recovered, and as his consciousness returned (which was nearly a week first) he complained of considerable pain at the side and back of the neck, and back of the head, with stiffness in moving his jaws, and difficulty of articulation, which continued more or less for several weeks. He was six or seven weeks before he was able to leave his bed, and for many weeks after he was obliged to live very low, keep very quiet, and take purgative medicines, or he suffered from severe attacks of pain in the head, and sickness, which several times required the application of leeches for their removal. He ultimately got quite well, and continues so at the present time.

III.—*Case of severe sprain of the sacro-iliac articulation.*

The following case possesses no other feature of interest besides its rarity. The sacro-iliac articulation is so strong that it is very seldom injured except in severe cases in which the pelvis is seriously damaged, and in which the injury to this joint is complicated with fracture of the bones and other mischief.

William Clayton, aged 25, a strong young man, by trade a mechanic, while working in a mill for the construction of machinery, met with the following accident in the beginning of April 1844. A rack suspended from the roof or ceiling of the building in which he was working, and which was filled with a number of heavy bars of iron, gave way, and fell upon him. He was standing in a corner of the room, and was in a stooping position at the time, so that he received the weight, amounting to more than a ton, on the back of his head and shoulders, and was forcibly bent down into the corner with his legs doubled under him. When extricated, it was found that his head and back were unhurt, but he complained of the most excruciating pain in the right hip, and at the lower part of the back, which was increased by any attempt to move

* We cannot agree with our correspondent in thinking that the presence of blood in the pharynx was sufficient evidence of the existence of a fracture through the base of the skull. It might, as he admits, have escaped from some vessels external to the skull.—*Ed. GAZ.*

† A System of Practical Surgery, by Professor Ferguson. pp. 427.

the right leg, or to bear any weight upon it. I saw him about two hours after the accident, and found him complaining of constant and dreadful agony, which he described as having the aching character peculiar to a severe sprain. On examining the part affected he referred the pain exactly to the point of junction of the sacrum with the right ilium. There was no bruise or sign of external injury over the part, except some swelling, and, in fact, he said that he had not been struck in that situation, but felt as if the injury had been caused by the weight which fell upon him forcibly doubling him up, and straining the lower part of his back. I could detect no injury to the bones of the pelvis or thigh, nor to the hip-joint, and the man could move the affected limb, though it caused him an increase of pain to do so. There was great tenderness, and, as I have mentioned, some swelling over the sacro-iliac articulation. The pain continued for several days, of the same constant aching character, but was unaccompanied by any constitutional disturbance. It gradually subsided, though for several weeks he could not bear to press the foot on the ground, and it was six or seven weeks before he attempted to walk. He ultimately quite recovered, and returned to work about two months after the accident: he was then still rather lame. The treatment consisted of perfect rest, with the application of leeches and fomentations in the first instance, subsequently gentle friction with soap liniment, and ultimately the application of a soap plaster spread on thick leather, supported by a bandage.

THE PERIODICAL MATURATION AND EXTRUSION OF OVA, INDEPENDENTLY OF COITUS, IN MAMMALIA AND MAN,

PROVED TO BE

THE
PRIMARY CONDITION TO THEIR
PROPAGATION.

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Translated by

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(Concluded from p. 699*.)

I THINK that the following observations upon a rat may also be classed with the

foregoing. The animal was taken in a trap during the night between the 1st and 2d of February, 1844, and remained in it alive until 11 A.M. on the morning of the third. On examination after death, which was effected by drowning, it appeared that numerous large and recent corpora lutea were developed in the ovaries. Inferring from that circumstance that the animal had been impregnated only a short time previously, I examined the vagina, uterus, and fallopian tubes, most minutely, but could not find any trace of seminal fluid in either of them. I discovered, however, the extruded ova in the commencement of the tube. I may observe, that the ova are extremely difficult to find in the oviduct, both in this animal and in the mouse. The tube is so small that it is not possible to cut it open with even the finest scissors. The observer therefore has no other resource left him but to dissect out, in the first place, all its tortuosities carefully, which of itself is no easy task, they being very closely compacted, and the tube measuring scarcely half a Paris line in diameter, and then to remove the contents of the oviduct, by very cautious and gentle scraping of small portions at a time, on to a plate of glass, examining them afterwards most minutely with a simple microscope. It is very difficult to detect the ova even then, for they are not only very small, but almost perfectly transparent also, the yolk being composed of only a very pale minutely granular substance. I was, however, as I have stated, fortunate enough to find the ova in the superior third of the tube. They measured, including the zona, 0.0041 P. in. = $\frac{1}{27}$ P. line, = $\frac{1}{3}$ millim. in diameter. The zona was about 0.0002 P. in. = $\frac{1}{300}$ P. line, = $\frac{1}{140}$ mil. in thickness. There was no longer any trace of the cells of the discus around the zona. The vitelline mass completely filled out the interior of the zona in all the ova; and I could not discover any thing of a vesicle, corpuscle, or the like, in them. I should attach great importance to the latter circumstance if the observation itself

the last part of this paper, during its passage through the press, although I had observed it in my manuscript. It occurs at page 696 in the second column, and line 18 from the bottom. The sentence should read thus, "receded from it, as though indicative of the presence of the germinal vesicle."

* I find I omitted to correct a serious error in 90s.—xxxv.

did not admit of a doubt with regard to its correctness; for the fact of the yolk being so very transparent ought to render the observation of those changes which occur in the germinal vesicle or germinal spot, previous to the commencement of the division of the yolk, much more easy in this than in any other mammalian ovum as yet investigated. The contents of the oviduct are, however, so small, that the ova cannot be examined at all without the addition of some fluid; and it becomes a question as to what changes that (in this instance it was saliva) might have already induced in the interior of the delicate ovulum. An ovarian ovum which I examined had about the same diameter; the yolk was, however, still more pale, and I most distinctly recognised in it the germinal vesicle, measuring 0.0011 P. in. = $\frac{1}{70}$ P. line, = $\frac{1}{31}$ millim., with its germinal spot of about 0.00039 P. in. = $\frac{1}{210}$ P. line, = $\frac{1}{93}$ millim. The germinal spot refracted the light strongly, had a very dark outline, and resembled a fat globule.

I think that this rat had not been impregnated, but that the ova had quitted the ovary and entered the fallopian tube notwithstanding. Had copulation been effected, according to all that I have observed on this point in other animals, the spermatozoa would have been discoverable somewhere in the female organs of generation, for the ova were yet in the superior part of the oviduct. In a mouse, in which, about two years previously, I had found the ova near the same spot in the oviduct, the entire uterus and the tubes were distended with seminal fluid, and spermatozoa were also present upon the zones of the ova. Probably, therefore, this rat was made a prisoner in the commencement of "the heat," before copulating, and the ova had quitted the Graafian vesicles without impregnation.

Previous observers, and among them Barry (Researches in Embryology, 2d series, p. 319, § 161), have frequently observed Graafian vesicles in the ovaries of the rabbit considerably swollen, and filled with blood. Several instances of the kind have presented themselves to me, but always only in does which had remained for a long time separated from the male. I never found an ovum in them, but only blood-corpuscles, the figure of which was more

or less distinct, definitely preserved, and recognisable. I think it probable that they are Graafian vesicles of a former period of "heat," from which the ova have escaped without the act of copulation having taken place. A short time since I examined a rabbit six or eight hours after coitus, and found that the ova had not as yet quitted the Graafian vesicles, which were much swollen. In addition to these, however, there were corpora lutea of a considerable size in both ovaries, which could not be the effect of a previous littering, as they were much too large for that, and the animal had also been kept alone for several weeks previously. I regard these, therefore, likewise as corpora lutea of a "period of heat" which had passed over without copulation.

From all that I have stated, then, it is quite certain, that at the period of "heat," and even when no act of copulation takes place, the ova of mammalia are extruded from the ovary, and enter the fallopian tube, but that they there prove abortive: corpora lutea, however, are formed upon the ovary as though coitus and impregnation had been effected.

As a counterpart to these observations, which prove the maturation and extrusion of ova independently of the seminal fluid of the male, I will adduce another fact, which proves the same on the other hand for the semen.

On the 6th of March, 1844, I examined a bitch, not knowing when the animal had received the male for the first time, but being certain that coitus had taken place the day before. The left ovary exhibited three corpora lutea, and in the centre of the oviduct I found the three ova quite normal in condition. The right ovary, on the contrary, was very small, and did not exhibit either a swollen or an opened Graafian vesicle, or corpora lutea, and of course there was no ovum in the tube. I found spermatozoa, however, in the uterus and oviduct not only as high as the ovary, but upon it. This proves positively that no especial design is in operation here. According to the general mode of considering organic phenomena, which always presupposes a precise design, one would have supposed that when no ovum was to be fecundated the seminal fluid would not have reached the part. But it had pursued its customary course uninter-

ruptedly, just as the ovum takes its own quite independently of the semen. There is no attraction, no polarity, or such like force, in operation here, such as we are so ready to apply to the supposed explanation of certain natural phenomena. Ovum and seminal fluid are altogether independent products of older organisms. Their meeting, and the consequent fecundation of the ovum, although necessary for the maintenance of the species, are in themselves quite accidental occurrences, frequent instances of which are so clearly evident in organic nature.

If, then, the foregoing observations prove, with respect to mammalia, that their generation and propagation are brought about *primo loco* by the spontaneous periodical formation and maturation of ova, and not by copulation, analogy alone would lead us to presuppose the like for man. But even here indirect proofs at least are not wanting.

It is well known that the function of menstruation in the human female was long ago and frequently compared with "the heat" in animals. Some of the most intelligent physicians and naturalists of various periods have adopted this opinion, although it was contended against by others no less celebrated than themselves. Regarding Bardach as the most important of the latter class, the only argument of all those brought forward by him which seems to me to have any weight is that in which he draws attention to the important distinction existing between "the heat" and menstruation, in respect to sexual impulse and copulation. The beast copulates *only* during "the heat;" man, on the contrary, always feels himself repelled from the female during menstruation. If this were correct, I should also be of the opinion that it involved an essential distinction. But attentive observers have previously remarked, and I can only confirm it, that such a distinction is altogether wanting, for the female of animals also manifests, at the commencement of "the heat," a condition of sickness, during which it altogether refuses to permit coitus to be effected. It seeks that act for the first time only when the phenomena attendant upon "the heat" have reached a certain stage of development. It is, however, also well known that a sensation of unusual

good health comes on, and the sexual impulse especially manifests itself in the human female, on the passing off of menstruation, and it seems to me, therefore, that the most complete accordance occurs here, and that all the arguments which have been brought forward in favour of the analogy between "the heat" and menstruation are rather strengthened than otherwise. A repetition of the arguments here would be superfluous.

All intelligent anatomists, physiologists, and physicians, have long since been convinced that the cause of menstruation, as well as that of the sexual impulse, and of the whole female character, is to be sought for in the ovaries. But that the uterus, on the other hand,—although it be the organ in which the characteristics of classes and species are most especially manifested, in so far as regards the genital organs,—yet, in the above respect has but a secondary importance. Numerous pathological facts of the most diverse description, and primary deviations from the natural formation, exhibit most constant accordance with this view. I shall quote only one such instance here; it is from a recent and almost unknown source of information upon castrated females, communicated by Dr. Roberts, in a work descriptive of a journey from Delhi to Bombay. The persons examined by him were twenty-five years of age, large, muscular, and perfectly healthy. They had no breasts, no nipples, and no hair on the pubes. The vagina was completely closed, and the arch of the pubis so narrow that the ascending ramus of the ischium, and the descending ramus of the pubes, were almost in contact. There was no deposition of fat about the neighbourhood of the genital organs, nor were the nates more developed than in man, whilst the rest of the body was well provided with fat. There was not a trace of menstrual secretion, nor anything which might supply its place; there was also no sexual impulse.

Anatomy has also recently furnished direct proofs in favour of the views advanced in this essay. Surprising as it seemed at first, from the endless controversies carried on respecting the corpora lutea, there is now no longer any doubt of the fact that, at each return of the function of menstruation, the ovary takes on a condition of in-

creased activity, that a Graafian vesicle becomes considerably developed, and bursts, and that a corpus luteum is formed in its place. The researches of R. Lee, Paterson, William Jones, Negrier, Gendrin, Raciborsky, and Pouchet, leave no room for doubt on this point. It would occupy too much space to repeat their observations here: I will only mention, that I have myself had the opportunity of making four observations which bear upon this part of our subject, all occurring in young and healthy persons, three of whom met their deaths by drowning, and the fourth died very suddenly. I found indubitable appearances of menstruation in all of them; on the ovaries of three of them a Graafian vesicle which had burst and was filled with blood, and on the fourth an enormously swollen one which had a diameter of seven lines. I learnt afterwards quite decidedly with respect to one of these instances, that menstruation was going on at the time when she met her death.

I have just received intelligence from Dr. Ecker, of Heidelberg, that he had found a Graafian vesicle which had burst, and was filled with a recent coagulum, in the body of a person aged 25, who had lately been executed there, and in whom menstruation had been present twelve days before death. He examined the tube with great care in search of an ovum, but in vain, probably because it had by that time undergone dissolution. Besides, in my opinion, the human ovum may be classed amongst the most difficult of all tubal ova to discover, in consequence of the slight density of its yolk, and the vaguely defined outlines of its zona.

It is therefore not to be wondered at, that numerous earlier observers—Valisneri, Santorini, Roederer, Haighton, Home, Brugnioni, Cruikshank, Meckel, Blundell, and others—have seen corpora lutea upon the ovaries of those who had never been pregnant, and even in those of virgins and young girls. Such instances were always regarded as exceptions to the rule, as pathological, or as results of sexual excitement occurring at some former period without coitus, whilst they no doubt were produced by recent menstruation, or the opening of a follicle and escape of an ovum.

Lastly, it is a well-known fact, that women conceive the most readily im-

mediately after menstruating, and even examples are not wanting where this took place only during menstruation.

It is likewise now a settled point that there is no more certain mode of reckoning the period of pregnancy, than that which dates from the last occurrence of menstruation. I have been informed by Professor Nägele that he had never once been deceived when reckoning nine months and eight days from the last menstrual period in regular instances. At the same time he told me, that he had frequently removed sterility by advising coitus immediately after, or even during menstruation.

Although at the present moment direct information as to the fate of the ovum during and after the menstrual period may be wanting, (for supplying which I hope that an early opportunity, combined with the necessary dexterity and care, may be presented), yet no doubt can be entertained, that:

“In the human female, during the period in which she is capable of child-bearing, there occur every four weeks a maturation and extrusion of an ovum from the ovary, which process is accompanied by a simultaneous secretion of blood from the uterus.”

I have no doubt that this law will not only stand the test of future experience, but will also serve to explain many phenomena hitherto unintelligible*. Experience will teach us what are the limits of its application in man. It appears that the secretion of blood from the uterus commences whilst the ovum is still inclosed by its Graafian vesicle, and that the latter bursts and the ovum escapes towards the termination of that function. While in the tube, the ovum is probably for some

* Dr. Panck, of Dorpat, lately brought forward a case, in which he considered he had discovered a remarkable organic connection between the fallopian tube and ovary soon after conception, by means of which the passage of the ovum from the ovary into the tube is effected and secured. For my part I am convinced, and for the following reasons, that this was a case of commencing menstruation, but not one of conception; firstly, coitus was by no means proved to have taken place; secondly, Professor Bidder did not find any spermatozoa in the genital organs, and lastly, because, although the conjectural act of coition should have been effected five days previously, yet the Graafian vesicle was still closed. I consider the connection between the ovary and fallopian tube, which was observed in this instance, as decidedly pathological. Delicate false membranes, of precisely the character described, are very common in connection with the female organs of generation.

days capable of fecundation on copulation being effected. What is the limit to this capacity? Direct observations alone can answer this question, and they are as yet altogether wanting. I believe, however, that I have a right to assume that fecundation must take place while the ovum is in the fallopian tube, since it is extremely probable that development first commences there. If, from all the information we at present possess, the conclusion may be permitted, that the ovum of the rabbit remains three days, that of the ruminant from four to five, and that of the dog from eight to ten days in the oviduct, we might then assume the ovum of the human female to be capable of fecundation during a period of from eight to twelve days after its extrusion from the ovary; thus probably, also, from eight to twelve days after the cessation of menstruation. Such a conclusion, however, being based upon analogy, is hazardous, for we know that very great varieties exist in different animals with respect to the time during which the ovum remains in the oviduct; for example, in the deer, according to my own observations and those of Dr. Zeigler, it most probably requires even months for its passage through the tube. All the attempts to define this period which have hitherto been promulgated,—where ova 12, 14, and 21 days old are reported to have been seen in the uterus, and in which even the embryo was already far advanced in its development,—are altogether unworthy of confidence, since they date from the act of coitus, which only specifies the limit of impregnation, but not the period at which the ova quit the ovary, nor do they admit of any conclusion as to the latter being drawn from them. The lengthened period during which the human ovum is capable of fecundation may possibly have been the cause why observation has as yet proved nothing precise upon this point. On the other hand, it does not appear that any ordinary circumstances, such as physical and moral excitement of the sexual impulse, and the like, could easily induce a change in the character of the maturation of ova, and thus also in the possibility of impregnation. The fact is contradicted by all our experience with regard to menstruation, which proves, indeed, that that function can be, and actually

is, sometimes accelerated or retarded; but still only by the operation of causes which exert a far deeper influence than those alluded to. Of course, all that is known with respect to menstruation has its value in relation to this point, since it indicates the period of maturation of an ovum; but the collected evidence with regard to that function shews an alteration, such as that mentioned above, to be something uncommon; and all our latest information on the formation of corpora lutea proves only that the above-named influences can hardly possess such a power.

It is doubtless unnecessary to draw attention to the extraordinary importance attached to the discovery of a law which relates to one of the weightiest interests of mankind. Science and society in general are in the highest degree interested in it. On this account I most warmly desire that numerous further tests of its truth may not be wanting, and that it may not be opposed by antiquated deeply-rooted prejudices, which are sometimes regarded as experience. But whoever proceeds to the test should previously qualify himself for the task by much embryological research, for he has to do with things which are not easily ascertained. The errors of centuries, not indifferent about the question, prove this. I hope to be able to meet well-grounded doubts, and will at once proceed to remove one such, which has already been frequently opposed to me. I have often been asked, "If conception be dependent on menstruation, and this again on the maturation of an ovum, how does it occur that women have frequently conceived who had never menstruated?" My reply is the simple statement, that although the secretion of blood be a normal, and the most striking phenomenon which accompanies the maturation of an ovum, yet it is by no means indissolubly connected with it. This is proved by the first glance at the animal kingdom, where this periodical maturation of the ova often occurs with, but more frequently without such a secretion. In the human female it is altogether a normal and important phenomenon; but by no means one which is essential,—it is only accidental. It may be absent, but mature ova may nevertheless be developed, and therefore also become impregnated. This will readily

harmonize with what experience shews, that in general such women are also altogether free from any abnormal symptoms.

Again, many will no doubt question the law laid down, on the ground that it is scarcely conceivable that so important a circumstance should have escaped observation altogether, and especially that of anatomists and physicians, during their numerous disputes respecting the corpora lutea. To this I would reply, that it is quite true many striking points were long since known; as, for example, the dependence of fruitfulness in the female upon menstruation, the admission of the fact that conception takes place more readily immediately after menstruation, the reckoning of pregnancy according to the last appearance of that function, and the like. The reason why these observations did not lead to the full knowledge of the matter lies no doubt in the frequent recurrence of the menstrual period, or the maturation of an ovum, and possibility of a conception. If women menstruated only once or twice in a year, it would long since have been remarked that such was the only time when conception was possible; menstruation would long ago have been recognised as perfectly analogous to "the heat" in animals, even though the most essential element of it, namely, the maturation of ova, had not been discovered. The possibility of conception, however, is, on the one hand, so frequently repeated, in consequence of the menstrual period occurring every four weeks, that, in the absence of farther data, it was not easily possible to fix the point of time with which it was connected more accurately; and, on the other hand, menstruation passes over so frequently without its purpose, conception, being attained, that the attention must naturally have been directed more to that function than to the dependence of conception upon it. With regard to animals, it was the precisely opposite relation of circumstances which proved the impediment to the correct perception of the analogy between "the heat" and menstruation. In them the period of heat either occurs so seldom, once or twice a year, or, when repeated more frequently, as in the cow, the sheep, the pig, &c. it is so interfered with by ordinary circumstances, such as our eco-

nomical arrangements and the like, that the animals are either immediately impregnated, or that the recurrence of the maturation of ova is obstructed and stopped by the secretion of milk. That an analogy, otherwise so striking, with one of our commonest domestic animals, the cow, should have remained for the most part unnoticed, is no doubt to be attributed to some of the above circumstances.

As regards the researches of anatomists and physiologists, we may remark, that they in the first place did actually make some correct observations; such, for instance, as those proving the formation of corpora lutea without coitus and conception. The fact that they did not interpret them correctly, nor develop them further, is an additional proof of the necessity for not only the corporeal eye and hand, but in the intellectual eye also for our observations, and shows how necessarily our researches must be accompanied by an idea, by reflection, if they are to apprehend correctly even simple relations of things. But these ideas were not mature, they could not be so; and the eyes of men, otherwise most distinguished, could not therefore be enlightened by them. Lastly, however, the rare opportunity for making observations on this subject must certainly be allowed great weight. Such opportunities occur but very seldom after the usual mode of death, the result of disease. Menstruation, the maturation and extrusion of ova, is too intimately connected with the functions of health, not to be interrupted by almost all modes of death, and therefore it is that, on examination afterwards, nothing is found. It is only in the bodies of perfectly healthy persons, who have met a violent death, that we can hope to obtain the required circumstances for observation. And how many of such as die suddenly will meet with their deaths exactly at the period of menstruation? and again, how many of those who do, will fall into the hands of such as are competent to so minute an investigation? The most favourable opportunities for the purpose would be afforded in the cases of executed criminals, where the requisite facts with regard to dates and so on may be precisely fixed.

[The remaining portion of the essay is chiefly devoted by Professor Bischoff

to the establishment of his claims to priority in the discovery of the fact which it is written to establish. His great rivals are Raciborsky and Pouchet. Having omitted that portion, under the impression that it would not be generally interesting, I feel myself bound to state that Professor Bischoff has so clearly and so fairly laid before his readers the facts of the case, that I think no one can have the slightest doubt of the merit being solely due to him. Others, as he says, may have given *indirect* proofs, but he has furnished the *direct* ones. I beg, in concluding my task, to apologize to the readers of this journal for the rough, and sometimes almost literal style in which I have placed my friend's valuable essay before them; I can only plead as an excuse, that my great object was to be faithful to my original, and that, had not the various divisions of the essay been prepared by me in great haste, and during a period of peculiar anxiety, I should gladly have devoted more time and labour to my subject.—
TRANSLATOR.]

ANALYSES AND NOTICES OF BOOKS.

“L'auteur se tue à allonger ce que le lecteur se tue à abréger.”—D'ALEMBERT.

The Veterinary Record, and Transactions of the Veterinary Medical Association, April 1845.

WE have derived much satisfaction from looking through this number of “The Veterinary Record”—a new publication devoted to papers and cases illustrative of the diseases of the lower animals. Works of this kind promise not only to prove useful to the class of practitioners to whom they are more especially addressed, but, not unfrequently, to afford valuable pathological hints to medical men. We think we cannot better explain the objects of the work than by giving a short analysis of the number for April now before us.

This number contains several rather interesting articles. Among these is a clever but rather grandiloquent disquisition by Dr. Patellani, of Turin, upon a solid bony tumor, of a tooth-like substance, preserved in the Veterinary College of Milan, which was found in the cerebral cavity of an ox; its form being similar to that of the brain. The

animal from which it was taken is stated to have been healthy, and to have attained the full size. The author says that Professor Tiedemann, to whom he mentioned the fact, was not astonished at hearing that the animal lived, in perfect health, with such a brain. He said that his medulla oblongata must have been very much developed, and likewise the nerves corresponding to the sinuses. The same opinion was likewise expressed by President Tomassini. The author succeeds in rendering it probable, by his statement of the anatomical and chemical characters of the concretion, that it once formed the greater part of the cerebral mass of the ox; but in endeavouring to prove that the animal to which it belongs must necessarily have been perfectly healthy, he loses the thread of his argument in a mist of transcendental perplexity.

The cases of “carditis in a bull,” and “melanosis in a horse,” are worthy of perusal. The latter disease, so rare in the human subject, is one of the most frequent and destructive maladies to which horses, especially those of a white or grey colour, are liable. Indeed, it has been stated that the larger proportion of grey horses die from this form of malignant disease.

There is also an interesting case of strangulation of the rectum in a filly, by one of the ovaria becoming pendulous and twisted around it. The ovarium was found loose, and constricted the rectum as tightly as if a ligature had been passed around it: it had inserted itself through a fold of the cellular membrane.

The following quotation is a proof that the profession of the veterinary surgeon occasionally well deserves to be termed a “pursuit of science under difficulties.” The author, Mr. J. Markham, was attending a horse affected with rabies. He says, “I proceeded to administer a cathartic ball, but before I could get my hand out of his mouth, a violent spasm came on, and he appeared similar to a horse having tetanus; the spasm continued for about a minute or two, but which seemed to me a very long time, as one of his tushes entered the under part of my wrist, and the other the back of my hand, which was anything but a pleasant situation to be placed in, since I could not tell how long the spasm

might last; but I happened to have the presence of mind to keep his tongue between his molar teeth, which prevented his jaws from closing so tightly as they otherwise would have done. My wrist was bitten very severely, one of the large tendons being divided, a portion of which protruding had to be excised." The author somewhat naively adds, it will be a caution to him in future never to attempt to give a rabid horse a ball!

A case is related of phrenic hernia in a horse, where it was found that nearly two yards of the ileum had passed through a laceration in the tendinous portion of the diaphragm, by the side of the opening through which the posterior cava proceeds, and become strangulated. Two days previous to his illness, the animal had been leaping over a bar, which might have been the immediate cause of this lesion.

It cannot be doubted that our knowledge of pathology would be greatly enhanced by a study of morbid anatomy in the lower animals. Various diseases which are rare, and imperfectly marked in the human subject, occur frequently, and are strongly developed, in many quadrupeds. Veterinary surgeons have evidently made great progress in the knowledge of this subject; indeed, the whole routine, both of their education and practice, appears to have assumed a strictly professional character. We are glad to see that, by a recent order, the veterinary surgeons of the French army are in future to receive the rank and pay of officers; and it is probable that the time will soon arrive when the well-educated surgeon of this class, will every where receive the consideration due to the practitioner of a liberal science.

To a reader who is not accustomed to works on veterinary medicine, the style of expression here used cannot fail to strike him at first as a kind of travestie upon medical writings, from its close adherence to the nomenclature adopted by physicians: but this impression soon wears off. We would, however, suggest to our veterinary friends that their adoption of the ordinary conventionalisms of the sick room—in calling a sick bull "the patient," for instance—has a somewhat ludicrous effect.

MEDICAL GAZETTE.

Friday, April 25, 1845.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medice* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."
CICERO.

ENGLISH AND SCOTCH GRADUATES UNDER THE NEW BILL.

IN a former article we alluded to a distinct class of practitioners created by the new Bill, under the name of "Inceptors in the Faculty of Medicine." We then stated that they were merely "licentiates" under another name, with one year added to the age, and that the necessity for the creation of such a class was highly questionable. Our attention has been more particularly recalled to this subject, by a letter addressed to Sir James Graham by Professor Quain, of University College*. This pamphlet differs from most of those which have appeared on the subject of the new Bill, in the temperate language in which it is written, and in the abandonment of medico-political views for a clear and logical exposition of some of the results which are likely to follow, if the clauses respecting the granting of medical degrees by British Universities and Colleges be retained in their present state. We have all along regarded the Inceptor class, as "cheaply-made" physicians—persons who, while they nominally take a higher rank, may in fact be inferior in qualifications to the licentiate in medicine and surgery. We here quote the clause respecting the Inceptor class:—

"And be it enacted, That it shall be lawful for any University of the said United Kingdom to grant the degree of Inceptor in the Faculty of Medicine, subject to the restrictions hereinbefore

* Observations on the Education and Examinations for Degrees of Medicine, as affected by the New Medical Bill, with remarks, &c. in a letter to the Right Hon. Sir James Graham, Bart. by Richard Quain, F.R.S. Professor of Anatomy in University College, London.

contained concerning medical degrees to any student of the same University who shall have attained the age of *twenty-two* years; and that every such graduate in the Faculty of Medicine, being also examined and having received letters testimonial of his qualification in the manner hereinbefore prescribed in the case of licentiates in medicine and surgery, shall be entitled to be registered by the said Council of Health as an *Inceptor in the Faculty of Medicine*, with all the rights, privileges and liabilities of a licentiate in medicine and surgery, subject to such general regulations as shall be made by the said Council concerning the registry of licentiates."

We can only account for the introduction of a clause of this kind by the fact, that it was objected to the former Bill, that it required so high a standard of education for a candidate to take the degree of doctor of medicine, as practically to make it a very restricted class. The remedy proposed in the present Bill is to create a lower order of physicians*, who, while they will have all the rights, privileges, and liabilities of licentiates in medicine and surgery, will certainly be inferior to them as professional men. So far from being an improvement, this is a retrograde step. We shall see, however, that the Scotch Universities are likely to be especially benefited if this clause should be retained; and, as farther results, owing to the greater facility in obtaining this degree thrown out by these Universities, that the class of licentiates will be small, the class of inceptors large, and the schools of London in great part abandoned for those of Edinburgh.

We can hardly believe that these portions of the new Bill, of which the unfair bearing upon the London schools has been so ably exposed by Professor

Quain, have been introduced with the deliberate intention of conferring a benefit upon one British University to the downright injury of another: we are inclined to adopt the more charitable view, that the Secretary of State cannot be aware of what are likely to be the real consequences of the Bill, should it become law.

The title of *Inceptor* is in many points of view objectionable. We can only suppose that it is intended to be a substitute for the degree of Bachelor of medicine. If it be not equivalent to this, or to some grade higher than this, it is impossible to conceive why the class should be created at all, for the privileges are no more than those of a "licentiate," with another name.

Now the question which we propose to consider is,—where are these Inceptors likely to receive their medical education, and to obtain their degrees? In discussing this question we shall make use of the pamphlet of Professor Quain. If one fact be more certain than another with regard to medical students, it is this, that under like privileges of practice, they will take out that degree which costs them the least trouble in regard to the period of study required, and the kind of examination which they have to undergo. Other considerations may also come into operation: for instance, the expense of studying for two years in Edinburgh is likely to be much less than that incurred in London. These matters, however, we lay aside, as of little importance compared with the benefits which the Northern University will, we believe, indirectly receive from the operation of the 22d and 23d clauses of the Medical Reform Bill. Again, admitting that under the new law, the "Inceptor" will possess the same privileges (see clause *suprà*) as the licentiate, with the bonus of an apparently higher grade, for the one

* Under the former Bill, bachelors of medicine at the age of twenty-two, could only be registered as licentiates in medicine and surgery. In the present Bill, the new class can register as "inceptors in the Faculty of Medicine." This appears to be nominally giving them a position above the licentiates.

would be a "University graduate,"—a Bachelor of medicine, *de facto*,—and the other a mere licentiate, it is we think obvious, that if greater facility be held out in a particular locality for obtaining the inceptorship, that locality will be especially favoured, and the licentiateship will be comparatively but little sought after. Such, we believe, will be the results of the present bill.

It has been long known that the Medical Faculty of the University of Edinburgh is opposed to that view which looks upon a good preliminary education in a candidate, as necessary to a graduate. This was plainly stated in their evidence before the Parliamentary Commissioners, many years since. In this view they differ from all who have written on the subject of medical education; and therefore, as it might have been reasonably expected, their opinions, unsupported as they were by any sound argument, were most unfavourably received by the Commissioners.

We select the arguments from Dr. Alison's report to the Commissioners, as quoted by Prof. Quain. The whole of the Faculty were stated to have concurred in these views, except the late Dr. Duncan. There are two principal grounds on which the pleading is rested.

"It lays down, that 'experience does not entitle us to say that the skill of physicians is by any means in proportion to their attainments in general literature and science. . . . In fact, we may safely assert, that the talents and habits of mind by which great and varied acquisitions of literature and science are made, and which a long-continued course of such study is calculated to form, are very different from those attainments by which the most judicious practitioners are distinguished. . . . Every medical man has besides to acquire habits of business, observation of mankind, and a knowledge of the world. These acquirements of themselves make up to many medical men for the want of scientific knowledge, but the knowledge

of all the sciences cannot make up to them for the want of those; and in general, I believe, we may say, that the habits of a student who has gone through a very long and varied course of literature and science, are not those which will fit a man for that kind of intercourse with the world, by which a physician must live.'"

We do not know that we can add to the force of the comments made by the Commissioners themselves upon this report; and as it is important to show that the present Medical Reform Bill is founded on principles entirely different from those which the Commissioners themselves recommend, we here reprint so much of their answer as bears upon the opinions of the Faculty respecting preliminary education:—

"The amount of this would seem to be, that literature is a positive evil to a physician; that it unfits him for the habits and state of mind which he ought to cultivate; and that it will be an obstacle to his success in practice. It is difficult to conceive that the learned medical faculty could have intended to go so far as this; but it is plain that there is much fallacy in the assertions, for it can scarcely be called reasoning, which they here adduce. It is unquestionably true, that if a man were to devote himself in the manner stated to literature and science, making these the chief, or almost the exclusive objects of his pursuit, he would not be a good physician: but this is not at all what is intended; the sole object being, that a physician should have that liberal education which is implied in a course of university attendance. By acquiring this, the mind would be invigorated for any intellectual pursuit, and it could superinduce no habit disqualifying for the activity of exertion, or for mingling in society as a medical man must do. Such education also, it is to be remembered, would be completed, or nearly so, before medical pursuits commenced, certainly long before practice was attempted, and would not therefore have the effect which is here supposed."

The grand argument for not making a good preliminary education a necessary

antecedent to medical studies remains to be explained; and we are sorry here to perceive that it partakes more of the "*argumentum ad crumenam*" than appears to us to be befitting in the Medical Faculty of any University. We know that fees will always be looked to more or less by all Universities; but if they are to be obtained by lowering the qualifications of graduates, they are obtained, to say the least, at the sacrifice of the respectability of the profession. It is like the circulation of a debased currency, for the adoption of which it would be a poor argument in a moral, although probably a fair one in a commercial light, that our neighbours were circulating coin which was inflicting pecuniary injury upon ourselves; therefore it may be said, we will, in self defence, lower our standard to exclude their currency. We can positively make nothing more than this out of the following argument, adduced by Dr. Alison, who, as Dean of the Faculty, speaks for his colleagues:—

"Unless it can be made quite clear that any additional qualifications which we (*i. e.* the University of Edinburgh) demand, will raise the value of the degree of our graduates *in the eyes of the public*, and *increase their chance of professional success*, the effect of making our degree more difficult of attainment will only be to increase the proportion of medical men practising upon inferior degrees, and to lower rather than to elevate upon the whole, the general average of the attainments of professional men."

We have placed two lines in italics, because it seems to us as if the standard of preliminary education were hereby made to depend upon the mere marketable value of a degree. The "*chance of professional success*" is well known to be very often greater with the quack and pretender than with the well-

educated physician; but is this a sufficient reason for any University lowering its standard to meet what may be a vitiated taste on the part of the public? Some may succeed as surgeons and apothecaries with diplomas obtained by a much less expensive education than that given in the University of Edinburgh, but we cannot agree that this is any reason for sinking the rank of physician in order to create a competing class, more especially when no better reason can be adduced than that without such a lowering of the grade, the University diploma would not be sought after. If men can acquire a right to practise "*with success and reputation*" without graduating as physicians in the University of Edinburgh, it plainly shews that the creation of a lower order of physicians is wholly unnecessary so far as the public are concerned; and, in relation to the profession, it can only be attended with the degradation of a highly respectable class. It is quite true that many may practise successfully with inferior qualifications, or degrees obtained elsewhere; but most of these practitioners would consider it an honour to obtain the highest degree—a feeling which can arise solely, as the Commissioners suggest, from the conviction that the having such a degree, would tend to increase their respectability and their practice. There is therefore no fair reason why the University should lower its grade. We hope to make it plain at a future time unless the intended alterations in the second Medical Reform Bill should render it unnecessary, that the "Inceptors" will exactly meet the wishes of the Medical Faculty, and that they will be able to procure their "*letters testimonial*" on much more favourable terms in the University of Edinburgh, than in any other University in the British dominions.

ON THE LATE CASE OF POISONING BY PRUSSIC ACID.

To the Editor of the Medical Gazette.

SIR,

Will you permit me to correct a very serious error which has appeared in the report given by Messrs. Hicks and Waterworth of a recent case of poisoning by prussic acid: it was published in the *MEDICAL GAZETTE* for the 11th inst. I am somewhat at a loss to know how this error has been committed, though it might have arisen from the perusal of some hasty notes which were given by me to Mr. Watson at the time I made the chemical analysis. In that report it is represented that the contents of the stomach had a smell of prussic acid, and that upon distilling them I obtained two drachms of a clear fluid having the odour of hydrocyanic acid, and giving, both with the iron and silver tests, ample evidence of its presence; moreover, that I obtained cyanogen gas from it, which burned with the characteristic purple flame. Now the latter part of this statement is altogether erroneous, for though the fluid as well as the contents of the stomach had the smell of hydrocyanic acid, yet the chemical evidences were so feeble, that if I had not been guided by the odour, I am convinced that they would have been passed by without any special notice; indeed, the nitrate of silver, which is by far the most delicate of the chemical tests, only gave a slight turbidity to the fluid, and it would have been perfectly impossible to have collected any from it, or to have procured any cyanogen from it. It is very true that I showed the combustion of the cyanogen gas, but this was from the remainder of the lotion of which deceased had taken one dose. The importance of this correction must be evident to every one, for if it is proved that deceased took only one grain of anhydrous prussic acid, and that I was able some time after her death to detect prussic acid in her stomach in such a quantity as to collect and burn its cyanogen, it will very naturally be supposed that much less than one grain would have been sufficient to destroy life. This, however, is a conclusion which I am not at all prepared to admit, nor do I think the question of a minimum fatal dose, so very important in a medico-legal point of view, will admit of a satisfactory answer, for there are too many circumstances which affect the operation of this poison. In experimenting upon animals, I have found that any debilitating cause will increase its activity, and thereby render the action of an otherwise small and harmless dose fatal; thus, for instance, fatigue, want of food, loss of blood, or disease, are all circumstances having this

effect. In this case it would appear that deceased, who was a Jewess, had been keeping the passover; it is a fact that only a little bisenit was found in her stomach.

I am, sir, yours, &c.

H. LETHEBY, M.B.

[We insert so much of Dr. Letheby's letter as bears upon the case of poisoning by prussic acid, published in our number for April 11th. The rest of his letter consists of criticism on matters which have no connexion with that case.]

In relation to the "*very serious error*" to which Dr. Letheby refers, we extract the following from a letter addressed to us by Mr. Hicks, in answer to an inquiry respecting his authority for the statement:—

"I was indebted to Mr. Watson for that part of my case alluding to the chemical tests, and I find I was in error so far as relates to the burning of the cyanogen; by way, however, of proving the correctness of my statements in all other respects, I send an exact copy of Dr. Letheby's own writing, as regards the means used for the detection of the poison, together with the tests and their results.

The bottle containing the fluid from the stomach, amounting to two ounces in quantity, was distilled in a water-bath, and about one drachm of a clear liquid came over; this smelt faintly of prussic acid, and gave chemical evidence of its presence by the iron and silver tests.

Tests.—1. The distilled fluid smelt of prussic acid. 2. A little was mixed with a double salt of iron, the sesquichloride, and then with a little liq. potassæ; to this was added a drop or two of muriatic acid, and a bluish yellow tinge resulted. 3. The remainder was mixed with a solution of nitrate of silver; a white turbidity resulted, which disappeared on boiling with nitric acid—a proof of its being cyanide of silver. The quantity of prussic acid was so small as not to be ascertained."

T. B. HICKS.

4, High Street, Newington,
April 16, 1845.

REMARKS.—Dr. Letheby complains that Mr. Hicks stated that the tests gave "*ample*" evidence of the presence of the poison; but this word "*ample*" does not occur in Mr. Hicks's report of the case; and the only error that we can perceive is, that there was not sufficient cyanide of silver obtained from the contents of the stomach to allow of the burning of cyanogen. The effects of the tests, taken in conjunction with the odour, appear to establish clearly that prussic acid was present in the stomach, although not in so large a quantity as Mr. Hicks had supposed. We are at a loss to perceive how Dr. Letheby can con-

vert this into a "very serious error;" the "*chemical evidences*," he admits, were "feeble;" still, as we interpret his meaning, he had no doubt of the presence of the poison in the contents of the stomach, and the feebleness of the tests was compensated by the distinctness of the odour. If he had even collected enough cyanide of silver for applying the test of combustion, we do not see how this would have made the case so very extraordinary as he represents. The twentieth part of a grain of anhydrous acid will furnish a sufficient quantity of cyanide of silver for the experiment. With regard to the effects of debility in modifying the action of all poisons, this has been long known. From Mr. Hicks's description, however, we should not imagine that the alleged debility from fasting had had any material influence in this instance: it is highly probable, from the report, that the deceased would have died from the dose taken, whether she had been keeping the passover or not*. The most interesting facts connected with the case were—1, that the whole of the symptoms during life, and appearances after death, were accurately observed and recorded; and 2d, that the dose which destroyed life was determined by the analysis of a part of the liquid swallowed. Whether the poison was found in the stomach or not, and whether a sufficient quantity of cyanide of silver was procured to yield cyanogen by heat or not, are matters of a subordinate description. Dr. Letheby admits that prussic acid did exist in the stomach, but the quantity was too small to yield enough cyanide of silver for procuring cyanogen.—*ED. GAZ.*]

MEMOIR OF THE LATE DR. HEBERDEN.

(*From a Correspondent.*)

[WE are induced to give insertion to the following memoir of an excellent and amiable physician, from the fact that the name of "Heberden" has been long and respectably known in the medical profession.—*ED. GAZ.*]

DR. HEBERDEN, the subject of the present memoir, was born in the year 1767, at the house of his father, in Cecil Street, and at the early age of seven years was sent to school at the Charter-house, where he acquitted himself with much credit, rising to the head of the school, and bringing away with him testimonials of regard from Dr.

Beardmoor, who was then head master. He was afterwards at St. John's College, Cambridge, distinguishing himself in the mathematical tripos at his B. A. degree in 1788, and subsequently gaining, by his pre-eminence in classical knowledge, the chancellor's medal, the members' prizes on two several occasions, and one of the few open Fellowships in his College, which, though of no great emolument, was a source of gratification to him, and during the few years which elapsed, previously to his entering upon the more arduous business of life, he often resorted to Cambridge in the quieter months of the summer, and availed himself of the facilities which were there afforded him of indulging his literary pursuits. Afterwards he went up to London, and applied himself more exclusively to the duties of his profession, attending at St. George's Hospital, and devoting himself to the business under all the advantages of the counsel and long experience of a father who had so successfully run the same course before him. In 1797 he became a Fellow of the College of Physicians, and soon obtained a tolerably extensive practice. On the death of his father, in 1801, he removed from Dover Street, where he had previously resided, to his house in Pall Mall, where he lived in the highest enjoyment of domestic comfort, and of friends remarkable for the high position they held in their various professions, and for the general reputation they possessed among the wise and good. Few men, indeed, have attained to higher qualifications as a companion. The varied nature of his acquirements, the extensiveness of his information, the untiring satisfaction with which he never ceased to read and admire the excellencies of the best authors in poetry and prose, the retentiveness of his memory, the accuracy of his knowledge, the eager interest he exhibited in everything that was useful and praiseworthy, with his perfect freedom from all pedantry and affectation, could not fail to secure to him the esteem of those who had the happiness to know him. Concurrently with general learning, the special interests of his profession moved onward. From a student in St. George's Hospital he became physician there, and soon was brought before the public as the editor of his father's "*Commentarii de morborum historia*," together with an English translation; shortly afterwards, he was known as the author of "*Epitome morborum puerorum*," and being a Fellow as well of the Royal Society as of the College of Physicians, he was also an occasional contributor to their papers. It may be mentioned, also, that on other subjects his facility of writing, either in prose or verse, was frequently put in requisition, and the beautiful inscription on the statue of Addison, in Westminster Abbey,

* We shall shortly have occasion to insert a case of poisoning by corrosive sublimate, where forty grains of that powerful irritant were taken by a woman fasting, but this debilitating cause, so far from increasing the activity of a small dose, assisted the woman in recovering from the effects of a large dose. Upon theoretical principles this woman ought to have died!

is from his pen. In 1806 he was appointed physician to Queen Charlotte, and on the death of Sir George Baker, in 1809, was made physician to His Majesty King George the Third, by whom he was more than once offered a baronetcy, with a pension, in the most gracious manner,—distinctions, however, which his own feelings induced him to decline. While thus in much prosperity, having attained in all periods of his life the highest honours to which his studies or his profession could lead him, and being in the full enjoyment of the reputation they carried with them, he was suddenly, in 1812, left a widower with nine young children. Every thing was at once sacrificed to the sense of duty by which he felt himself called upon to superintend the highest interests of the children committed to his charge. The charms of general society, the excitement of professional engagements, each having strong claims upon an intellectual and active mind, were abandoned cheerfully for the wearisome and unostentatious duties of watching over an infant family, and administering to their comfort. His practice as a physician was now restricted to his attendance at Windsor Castle, and this alone interrupted, even for a day, his devotion to his children. Under the suspension of the more bustling engagements of life, he retired to the little village of Datchet, in Bucks, where he lived for fourteen years, surrounded by his books, and rather avoiding than courting society. During this period he printed, and dedicated to his children, a translation from the moral works of Plutarch, on Brotherly Love, and he had previously written and published a little treatise on General Education, which, of themselves, sufficiently attest the anxious occupation of his mind. As he obtained further leisure, he amused himself with translating Cicero's letters to Atticus, which he subsequently published in two volumes octavo. In 1826, having attained his purpose in absenting himself from London, he returned thither again, partly with the design of affording to one of his sons, then entering upon the preliminary studies of a physician, that information and encouragement which he had himself received with so much delight from a parent's lips. It was at the same hospital in which he had acquired his own first practical knowledge, that his son, a most promising young man, and eager in his profession, was present at a post-mortem examination, in which he was greatly interested, when incautiously taking into his hand, which was slightly punctured, a portion of the body, the deadly virus so affected him that within a week he died. The grief of this loss never ceased to create a melancholy interest in every thing relating to his profession. In the following year (1829) he lost another

son, and in four years afterwards his eldest daughter, the fond companion of his former widowed years. Under this succession of afflictions fast falling upon him, it may be inferred how his mind was engaged from the writings which then appeared; for in 1830 he published his *Reflections on the Gospel of St. John*; in 1836 he printed a translation of the Catholic epistles, which was circulated among his friends; and in 1839, at their request, he published a translation and running commentary on the whole of the apostolical epistles and the Book of Revelation.

Amidst the many panegyrics which justice, or charity, or affection, bestow on departed worth, it is seldom that we are able to point to such unequivocal proofs of merit in all the stages of life; to such tokens of what the learned Barrow has well styled, "Industry in his general calling as a christian; industry in his particular calling as a scholar and a gentleman." While these more prominent features in this brief history are within the reach of public inquiry, private friendship only can disclose the warmth of his affection, the gentleness of his manners, the charity of all his sentiments, his generous disregard of money, the extent of his benevolence, and his inflexible adherence to the strictest truth, from which no circumstances of difficulty or delicacy could ever induce him to swerve; and, above all, the unaffected piety, and undoubting confidence in the wisdom and goodness of every dispensation of Providence, which influenced all his conduct, and supported him with unruffled serenity to the last moment of his life. He died at his house in Cumberland Street, on the 19th of February, 1845, and was buried in his family vault in the parish church of Windsor.

CASE OF HYDROCELE.

To the Editor of the Medical Gazette.

SIR,

If you think the following case, in which a hydrocele had been allowed to acquire an enormous size, and which was cured by the simple injection of a solution of sulphate of zinc, of sufficient interest to your numerous readers, you will oblige me by inserting it.

I am, sir,

Yours very obediently,

JOHN M. BURTON.

Croom's Hill, Greenwich,
March 23, 1845.

I was consulted in March 1839, by a farmer of the name of Lynn, residing at some distance in the country, respecting a hydrocele, of which he had been for many years the subject, but for which he had never

previously asked advice, from having been told that he would have to undergo a dangerous operation for its cure.

He stated that he was 45 years of age, and had always enjoyed good health. About fifteen years since he received a violent blow on the right testis by being thrown forwards on the pommel of his saddle. The blow was followed by considerable pain and swelling, which subsided in a few days, leaving, however, a pyriform tumor, about the size of an orange; this tumor, which gave him no pain, did not alter in size or appearance until about three years since, when it began to enlarge, and gradually increased to its present size. It now extends to within three inches of the knee, and causes great inconvenience from the mechanical impediment it affords to progression, and also from its weight; from the constant friction, the skin of the scrotum and inside of the thigh has become abraded and ulcerated to a great extent. On tapping the swelling, I drew off five pints of a turbid brown coloured fluid.

He immediately experienced great relief, and was directed to keep upon his back.

August 22d. — I tapped the swelling again, and drew off a pint and a half of clear straw-coloured fluid, and then injected the same quantity of water, holding 5j. Zinci Sulph. in solution. This was retained four minutes, and produced no great amount of pain.

24th. — He had severe pain in the afternoon after the operation, which lasted all the next day, but has now subsided. The sac is as large as two fists, very hard, and of great weight; the scrotum hangs loosely to a distance of, at least, three inches below the lowest part of the swelling.

27th. — Scrotum resumed its natural appearance, having regained its elasticity; it embraces the swelling now pretty closely: this remains of about the same size.

April 15th. — Tumor diminishing, is not so solid; slight fluctuation anteriorly. Infric. Ung. Iodinæ c. Hydrarg. nocte et mane.

May 6th. — Tumor now of the size of a small orange, and firm. The epididymis to be felt rather enlarged. Pergat.

June 5th. — Tumor about the size of an egg. Omittit Ung.

July 26th. — There is scarcely any difference between the testicle on the sound and that on the affected side. He suffers no inconvenience, and says he feels himself relieved from a most oppressive burden.

IMPROVED KIND OF LIGATURE.

DR. THOMAS M. LEE observes, that "in using the common double ligature, he has oftener than once experienced a good deal of inconvenience—when the patient was uneasy, from the necessity for some manipu-

lation—in order to ascertain which were the ends of the one, and which of the other thread." It has occurred to Dr. L. that the apparatus alluded to might be rendered much more perfect by having one-half of each thread intended for a double ligature dyed black, while the other half is allowed to retain its original light colour. The advantages of this plan are, that after the needle is cut away, the two ends of each thread can be easily seized and tied, saving the patient from the anxiety which delay occasions. The difference in colour at once distinguishes the one ligature from the other, so that there is no need for any pulling at the different ends to gain this information. The preparation of this thread is very simple, one-half only of each hank having to be dipped into the dye. The hank thus prepared may then be cut through, either at one point in its circumference where the black and white parts meet, or at two, viz. in the middle of the white, and again, in the middle of the black part.—*London and Edinburgh Monthly Journal*, March.

MEDICAL INTELLIGENCE.

THE second reading of the Medical Profession Bill has been fixed by Sir James Graham for this evening. Certain alterations and amendments are in contemplation, although the nature of these is not stated. The principle of the Bill, so far as regards equality of qualification, or an equal right to practise throughout the United Kingdom, will be preserved,—a principle to which we think all reasonable men must give their concurrence. It is proposed that after the second reading the Bill shall go into Committee *pro forma*; but that the alterations and amendments will not be discussed in Committee until after the new Bill has been circulated through the country for at least a fortnight. This discussion will not probably come on before the latter end of May.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

Members admitted to the Fellowship, April 17, 1845.—E. Canton, St. Martin's Lane.—W. W. Cooper, Tenterden Street.—W. E. Crowfoot, Beccles.—H. Davis, Tenbury.—J. E. Erichsen, Welbeck Street.—G. Harcourt, Chertsey.—W. A. Hillman, Argyll Street.—E. Jackson, Chaddeley Corbett.—A. Keyser, Norfolk Crescent, Hyde Park.—W. T. Lucas, Featherstone Buildings.—R. G. Shute, Mecklenburgh Square.—J. Stilwell, Uxbridge.—C. M. Vowell, St. Helena.—J. T. Ware, Russell Square.—J. L. White, Dowlais.

List of Gentlemen admitted Members, April 11.—J. Gardner.—R. R. Jefferiss.—

C. Muscroft.—W. M'Hugh.—J. C. Wordsworth.—W. H. Thornton.—T. B. Horne.—T. A. H. Dodd.—R. R. Noble.—R. S. Cross.

14th.—T. Atchison.—J. Palmer.—J. Richardson.—J. T. Griffith.—F. Blake.—J. T. C. Ross.—A. Priest.—T. G. Stockwell.—J. Vass.—W. G. Dalgarns.

18th.—E. Snell.—J. Duncan.—T. Fisher.—T. Alderton.—P. Roscow.—E. C. Odling.—W. Lightfoot.—R. Abud.—J. Ody.—W. Smith.—J. Hewett.—T. D. Scott.

21st.—R. S. Finch.—C. Vicary.—B. Mickethwaite.—H. Wiglesworth.—R. M. Bowman.—F. H. Johnson.—G. A. Hallion.—J. C. Austen.—F. Frampton.—E. Cripps.

APOTHECARIES' HALL.

Gentlemen who have obtained Certificates, April 10.—J. Lewis, Treleach, Carmarthen-shire.—R. Appleton, Munslow, Salop.—H. E. Cullen.—W. T. Iliff, Newington Butts, London.—N. Kennicott, Monkwearmouth.—J. Wallace, Carshalton.—D. S. Penrice, Great Yarmouth.—E. Martin, Bristol.

17th.—F. H. Harris, Botesdale, Suffolk.—W. Tickell, Looe, Cornwall.—D. Davies, Pant Einon, Cardiganshire.—S. W. Burbury, Birmingham, Warwickshire.—W. Hoar, Maidstone, Kent.—J. W. H. Mackenzie, Cheadle, Staffordshire.—T. H. Smith, St. Alban's.

NOTICES TO CORRESPONDENTS.

"**MEDIATOR.**" The writer of the letter signed "**Mediator**," in our last week's number, wishes the following corrections to be made. At page 940, col. 2, line 19 from top, the sentence should stand:—"In regard to the period to which admission to the fellowship by seniority should have been extended, I think liberality ought to have been manifested." Farther on, after the word "**successors**," the following has been omitted—"but of all members of the profession these gentlemen ought to be, and I have no doubt are, best qualified to pass the requisite examination; and to that test they should have been subjected, if they did not choose to wait their turn of seniority." A fresh paragraph ought then to have commenced as follows:—

"The arrangement which I have suggested cannot now be carried into full effect, as the fellows who have been appointed cannot be deprived of their titles; but it is worthy of deliberate consideration," &c.

Without these corrections and additions the letter is quite unintelligible. I therefore beg your insertion of them.

The communications of Dr. Jago, Dr. Rowland, Mr. Stewart, Mr. Tomes, and

other correspondents, have been reserved for the new series.

We shall be glad to insert in the new series, the papers on Malingering by Mr. F. Calder.

"**Idios.**" We are in arrears with so many correspondents that we regret we cannot find room for the letter.

Dr. Golding Bird. A proof shall be forwarded.

MORTALITY OF THE METROPOLIS.

Deaths from all causes registered in the week ending Saturday, April 12.

ALL CAUSES	906
SPECIFIED CAUSES	905
I.—Zymotic (Epidemic, Endemic, and Contagious) Diseases, 155; among which, of—	
Small Pox	16
Measles	18
Scarlatina	17
Whooping Cough	50
Croup	6
Thrush	3
Diarrhoea	4
Dysentery	3
Cholera	0
Influenza	1
Typhus	26
II.—Dropsy, Cancer, and other Diseases of uncertain or variable Seat, 87; among which, of—	
Hæmorrhage	0
Dropsy	30
Scrofula	3
Cancer	11
Atrophy	10
Debility	16
Sudden Deaths	5
III.—Diseases of the Brain, Spinal Marrow, Nerves, and Senses, 141; among which, of—	
Hydrocephalus	30
Apoplexy	18
Paralysis	14
Convulsions	42
Insanity	1
Delirium Tremens	1
IV.—Diseases of the Lungs, and of the other Organs of Respiration, 318; among which, of—	
Pneumonia	84
Hydrothorax	4
Asthma	30
Phthisis or Consumption	146
Diseases of the Lungs, &c.	22
V.—Diseases of Heart and Blood-vessels	39
VI.—Diseases of the Stomach, Liver, and other Organs of Digestion, 67; among which, of—	
Teething	16
Gastritis	0
Enteritis	12
Tubercles	7
Hernia	1
Disease of Stomach, &c.	4
Disease of Liver, &c.	9
VII.—Diseases of the Kidneys, &c.	8
VIII.—Childbirth, Diseases of the Uterus, &c. 15; among which, of—	
Childbirth	11
Disease of Uterus	3
IX.—Rheumatism, Diseases of the Bones, Joints, &c.	5
X.—Diseases of Skin, Cellular Tissue, &c.	1
XI.—Old Age	54
XII.—Violence, Privation, Cold, and Intemperance	15

WILSON & OGILVY, 57, Skinner Street, London.

INDEX TO VOL. XXXV.

(VOL. I. FOR THE SESSION 1844-45.)

A.

Abercrombie, Dr. John, death of, 336.
 Abstract of the most material facts of the controversy between Dr. Lee, of London, and Dr. Paterson, of Leith, relative to the structure of the corpus luteum, 494.
 Abscess of the abdomen, Mr. Arnott's clinical lecture on a case of, 401; of the labium pudendi, 402; of the side, 403.
 Abscess in the abdominal muscles, Mr. William Smith's case of, with disease of the pubic bones, 517.
 Acesius: a survey of the ethical relations of medicine, by Dr. Marx, 14, 51, 87, 102, 113, 184.
 Address of the Society of Apothecaries, editorial observations on the, 258.
 Addison, Mr. William, on the transformation of pus-cells into a mucous or fibrous tissue, 69, 250.
 Alison's, Dr. Somerville Scott, medical cases:—small stomach, 135; ossification of gall-bladder, 137; hypertrophy of the heart, *ib.*; case of hydatid tumor of the liver, with remarks, 18; on the state of the poor in Scotland, 310; on pericarditis, a complication and sequela of scarlatina, 664.
 Allnatt, Dr. on ergotization of the tipulidæ by hydrocyanic acid, 675; on hepatalgia, 796.
 Alum and opium, the combination of, recommended by Dr. Hoffmann in cases of lead colic, 207.

Amaurosis, case of, occurring suddenly, 240.
 Ammonia given off by albuminous fluids, 750.
 Amnesia complicating acute rheumatism, Dr. Linsem's case of, 304.
 Amussat's, M. case of lumbar enterotomy, without opening the peritoneum, performed with success upon a woman aged 53, 269; researches on the wounds of blood-vessels, 496.
 Analysis, comparative, of the food consumed, and the excrements passed, by a turtle-dove, 399.
 Aneurism, Dr. Brereton on a case of, 398.
 Aneurism of the right subclavian artery, Mr. Aston Key's case of, 334.
 Aneurism, Mr. Erichsen's translation of the works of the principal writers on, reviewed, 801.
 Ankle-joint, Mr. Stafford on a case of compound dislocation of the, 327.
 Apothecaries' Hall, lists of gentlemen who have received certificates, 32, 64, 96, 176, 208, 240, 272, 304, 368, 432, 464, 624, 656, 688, 756, 784, 816, 848, 880, 912, 944, 976.
 Apothecaries, proposal to establish a Royal College of, 396.
 Apoplexy, Dr. Edward Blackmore on the cure of, 855.
 Arnold, the Rev. Dr. some particulars connected with the death of, 62.
 Arnott's, Mr. clinical lecture on a case of abscess of the abdomen, 401.
 Arnott's, Dr. A. description of the operation of lithotomy as performed by a native hakeem, 621.
 Arnott, Dr. James, on the present state of therapeutical inquiry, 407, 474, 481.

- Arsenic, remarkable case of poisoning with, related by Professor Wöhler, 655.
- Arsenic, on determining the quantity of, and at the same time obviating the inconveniences encountered with Marsh's apparatus, 716.
- Arsenic, Dr. Krafft's case of poisoning by, treated with hydrated oxide of iron, 750.
- Association of general practitioners, objection to the, 812.
- Assistants, unqualified, and medical pluralities, remarks on the injury done by, to the regular practitioner, by a Member of the North of England Association, 240.

B.

- Baker *versus* Lowe, remarks upon the recent trial in the Court of Queen's Bench, 733.
- Baly, Dr. W. on the mortality in prisons, and the diseases most frequently fatal to prisoners, 740.
- Ballingall's, Sir George, outlines of military surgery, reviewed, 547.
- Barlow, Dr. on the depuration of the blood, 269.
- Bartlett's, Mr. Thomas, observations on syphilis, 73.
- Basedow's, Mr. case of luxation of the head, and fracture of the neck of the thigh-bone, 367.
- Baths for the million—baths for the individual, 590.
- Bell's, Mr. Jacob, concise historical sketch of the progress of pharmacy in Great Britain, reviewed, 161.
- Bessens's, M. case of empalement without visceral injury, 846.
- Bethlem Hospital, regulation for the admission of pupils at, 264.
- Bile, Dr. George Kemp on the functions of the, 76.
- Birmingham and Midland Districts Medical and Surgical Association, meeting of the, 875.
- Bird, Dr. Golding, notice by, of the crystalline form of carbonate, and discovery of the oxalate of lime in the urine of herbivora, 49; account of Professor Mulder's researches on the chemical physiology of red colouring matter of blood, 415; his work on urinary deposits, reviewed, 419.
- Blackmore's, Dr. Edward, observations on the more important diseases of the nervous system, with illustrative cases, 569, 596, 630, 671, 699, 723, 760, 789, 822, 855, 917, 934.
- Bladder, Dr. Thienemann's case of ligature of a polypus of the, 175.
- Bleeding, Dr. Mayo on, in cases of congestion, 146.
- Blindness, sudden, Dr. Synnot's case of, 160.
- Blood, Dr. Andrew Buchanan on the white or opaque serum of the, 11.
- Blood, Mr. Golding Bird's account of Professor Mulder's researches on the chemical physiology of red colouring matter of the, 415.
- Blood, Dr. G. O. Rees on the, principally in regard to its physical and pathological attributes, being the Gulstonian Lectures for 1845, 753, 826, 849.
- Blood, Mr. Prescott Hewett on the extravasation of, into the cavity of the arachnoid membrane, 684.
- Blood, Mr. Gulliver on the formation of the buffy coat of the, 687.
- Blood-vessels, M. Amussat's researches on the wounds of, 496.
- Boards of Guardians, remarks by Mr. Porter on the conduct of, towards district medical officers, 735.
- Bone, M. Flourens on the formation of, 68.
- Books, analyses and notices of:—
Braithwaite's retrospect of medicine and surgery, 24.
Miller's principles of surgery, 89.
Mr. Samuel Cooper's introductory address to the students of University College, at the opening of the winter session in the faculty of Medicine, 1844-45, 117.
Dr. Davies's exposition of the laws which relate to the medical profession in England, 161.
Mr. Jacob Bell's sketch of the progress of pharmacy in Great Britain, 161.
Graefenberg; or a true account of the water-cure, by H. H. Graham, M.D. 199.
Dr. Guy's principles of forensic medicine, 227.
Guy's Hospital reports, No. 4, 256, 454.
Sir G. Lefevre's apology for the nerves, 290.
Medico-Chirurgical Transactions, vol. 19, new series, 325.
Kæmütz's complete course of meteorology, 355.
Dr. Golding Bird on urinary deposits, 419.
Dr. Christison's treatise on poisons, fourth edition, 450.
Mr. Greenhow's medical report of the case of Miss H— M—, 438.
Mr. Radford on galvanism, applied to the treatment of uterine hæmorrhage, 490.
Sir George Ballingall's outlines of military surgery, 547.
Statistics of recruiting, 550.
Mr. Quain's anatomy of the arteries, 586.
Dr. Hall on the nature and treatment of some of the more important diseases, medical and surgical, including the principal diseases of the eye, 613.

- Dr. Wagner's elements of the comparative anatomy of the nervous system, 649.
- Dr. William Gregory's outlines of chemistry, 673.
- Contributions towards a fauna and flora of the county of Cork, 680.
- Dr. Marshall Hall's practical observations and suggestions in medicine, 710.
- Mr. Durlacher's treatise on corns and bunions, 717.
- Messrs. Goodsir's anatomical and pathological observations, 736.
- Mr. Peschel's elements of physics, 737.
- Dr. Mulder on the chemistry of vegetable and animal physiology, 774.
- Mr. Newnham on human magnetism, 777.
- Observations on aneurism, selected from the works of the principal writers on this disease, and translated by Mr. Erichsen, 801.
- London Medical Directory, 802.
- Mr. Moore on the structure of the lungs, *ib.*
- Mr. Strauss's remarks and comments on the medical and chemical evidence adduced at the trial of John Tawell, 860.
- Schenlein's clinical lectures, 866.
- Sir J. M. Tierney's observations on variola vaccina, or cow-pock, 868.
- Dr. Wells's essay upon cretinism and goitre, *ib.*
- Dr. Furnivall on the diagnosis, prevention, and treatment of diseases of the heart, and of aneurism, 897.
- Mr. Mortimer on the growth of children's teeth, 927.
- The Veterinary Record, and transactions of the Veterinary Medical Association, April 1845, 967.
- Boussingault's, M. comparative analysis of the food consumed, and the excrements passed, by a turtle-dove, undertaken with a view to ascertain whether or not there is any exhalation of azote during respiration in the granivora, 399.
- Bourgery, M. on the relations in point of weight of the nervous parts of man and some animals, 462.
- Brain, Mr. Solly's contributions to the pathology of the, 245.
- Brain, Mr. John Chatto on a case of absence of a portion of the, 487.
- Braithwaite's, Mr. retrospect of practical medicine and surgery, reviewed, 24.
- Breath, offensive, Dr. A. L. Wigan on a remedy for, 224.
- Brereton, Dr. on a case of aneurism, 398.
- British Medical Association, communication from the Society of Apothecaries to the, 496.
- Brodie, Sir Benjamin, note from, 265.
- Buchanan, Dr. on the white or opaque serum of the blood, 11.
- Burial-clubs, Mr. Clay on the influence of, on the mortality, 209.
- Butterflies, uric acid excreted by, 623.
- C.
- Calculus, M. Lassaigne on a new species of, found in the kidneys and ureters of a bitch, 622.
- Calculi, urinary, of reptiles, M. Duvernoy on the, 207.
- Capillaries of the head, Mr. T. W. King's practical reflections on the, 252.
- Carbon, Mr. Rigg's experiments on the promotion or secretion of, by animals, the disappearance of hydrogen and oxygen, and the generation of heat during the process, 220.
- Carbonate of lead, Mr. John Shaw's case of poisoning by, 240.
- Carter, Mr. C. T. on the organization and protection of the medical profession: the Quarterly Review, &c. 605.
- Carter's, Mr. remarks on the amended medical bill, 830.
- Caries, Mr. Samuel Maclean's description of a modification of the spherical-headed cutter for the excision of, 539.
- Carus's earth-life, a specimen of ideal physiology, 39.
- Chatto, Mr. mesmerism applied to surgical operations, 351.
- Chatto's, Mr. John, case of absence of a portion of the brain, 487.
- Chatto, Mr. on the employment of mesmerism during surgical operations, 603.
- Chemistry, importance of the study of, 730.
- Child's, Mr. new hemorrhoid needle, 925.
- Chisholm's, Dr. case of excision of nearly one-half of the lower jaw, 46.
- Christison's, Dr. treatise on poisons, review of the fourth edition of, 450.
- Chronic cases, Dr. Mayo's record of, treated with partial or entire success, in which morbid changes of the cerebral or spinal system have existed, or have been threatened, 352.
- Clay, Mr. on the influence of burial-clubs on the mortality, 209.
- Cleft palate, Mr. Fergusson's observations on, 389.
- Coal as fuel, when first used, 879.
- Cole, Mr. on a case in which a foreign body was impacted in the throat, 127.
- College of Physicians, new charter to the, 779.
- Collier's, Mr. case of accident to the shoulder-joint, 925.
- Colon strangulated by the meso-colon, Dr. Gilman Davis's case of, 847.
- Colostrum of the cow, Dr. Davy on the, 933.

- Contributions towards a fauna and flora of the county of Cork, 681.
- Conversazione at the Royal College of Physicians, 558.
- Congestion, cerebral, Dr. Mayo on a case of, 17.
- Congestion, Dr. Mayo on bleeding in cases of, 146.
- Cooper's, Mr. Samuel, introductory address to the students of University College, at the opening of the winter session in the faculty of medicine, 1844-45, 117.
- Cooke, Mr. W. on the medical treatment of the case of the Rev. Dr. Arnold, 62.
- Corpus luteum, Dr. Robert Lee on the, and its value as a test of early pregnancy, 150.
- Corpus luteum, abstract of the most material points of the controversy between Dr. Lee, of London, and Mr. Paterson, of Leith, relative to the structure of the, 494.
- Corpus luteum, Dr. Paterson on the structure of the, 640.
- Corpora lutea, reply by "Scrutator" to Dr. Paterson's remarks on the, 709.
- Cotton, Mr. Charles, on the propriety of the refusal by hospital surgeons to countenance mesmerism, 427.
- Cough of twelve months' duration, Mr. Fearnside's report of a case of, treated in University College Hospital, 177.
- Cough, Dr. Mayo's report of a case of, with occasional hæmoptysis, treated by him in the St. Marylebone Infirmary, 485.
- Creosote in *nævus maternus*, recommended by Dr. Thornton, 176.
- Cyanides, Dr. Lethely on the poisonous effects of the, 603, 676.

D.

- Dalrymple's, Mr. John, sketch of a bill for the better regulation of the medical profession, 167.
- Dancing over the dead, 457.
- Daniell's, Mr. W. F. observations on the medical topography, climate, and diseases of the bights of Benin and Biafra, 435, 515, 582, 643, 706, 771, 886.
- Davies's, Dr. exposition of the laws which relate to the medical profession, reviewed, 161.
- Davis's, Dr. Gilman, case in which the colon was strangulated by the meso-colon, 847.
- Davy, Dr. on the colostrum of the cow, 933.
- Deformities, Mr. Tamplin's lectures on the nature and treatment of:—

LECT. 1.—*Talipes varus non-congenitus*, 33; *talipes valgus*, 36.

LECT. 2.—Treatment of *talipes valgus*, 65; *talipes equino-varus*, 67; *talipes equino-valgus*, ib.; treatment, 68.

LECT. 3.—*Talipes valgus*, 129.

LECT. 4.—*Talipes calcaneus*, 241; congenital deformities of the foot, 142; non-congenital deformities of the foot, 243.

LECT. 5.—Deformities of the knee-joint, 305; *genu valgum*, or knock-knee, ib.; *genu valgum* with outward inclination of the opposite knee, 307; *genu valgum* with curvature of the bones, ib.

LECT. 6.—Treatment of *genu valgum*, or knock-knee, by general means, mechanical, and surgical and medical, 369; *genu extorsum*, or outward inclination of the knees, 371; treatment, ib.

LECT. 7.—Division of the *vastus externus* and *fascia lata* for knock-knee, 465; relaxed condition of the ligaments of the knee-joint, admitting of undue motion antero-posteriorly, ib.; treatment, 466; contraction of the knee, commonly called *ankylosis*—congenital, ib.; non-congenital, 467; causes acting directly, ib.; injuries of various kinds, ib.; inflammation simply, 468; rheumatism, ib.; scrofulous disease, or "white swelling," with abscesses about the joint, 469; indirect causes, 473; injuries to the spine—cerebral or spinal irritation, 473.

LECT. 8.—Treatment of contraction of the knee-joint in the flexed position—mechanical and surgical, 561; means of forming a diagnosis, ib.; case of contraction from inflammation successfully treated mechanically, ib.; signs which may be considered favourable, 562; signs which are unfavourable, ib.; section of the *semi-membranosus*, *semi-tendinosus*, and *biceps*, ib.; mode of performing the operation, ib.; contraction of the *gastrocnemius* as a consequence, 565; contraction of the flexors and adductors of the hip as a consequence—treatment of, ib.; dislocation backwards of the tibia on the femur—treatment of, 567; dislocation backwards of the tibia on the femur—treatment of, 587.

LECT. 9.—Contraction of the knee-joint in the straight or extended position—congenital—non-congenital, 657; case of congenital contraction of the thighs, knees, and feet, ib.; causes of non-congenital contraction, 658; treatment—surgical and mechanical, ib.; division of the *rectus femoris*, ib.; contraction of the hip-joint—congenital—non-congenital, 659; causes of non-congenital, ib.; treatment—mechanical—surgical and mechanical, 661; section of the *rectus femoris*, of *tensor vaginæ femoris*, and *adductor longus*, 661.

LECT. 10.—Angular curvature of the spine, 913; treatment of angular curvature, 916.

Desiderio, M. researches by, upon the poisonous effects of sulphate of quinine, 878.

Dicken's, Mr. case of hæmorrhage from the stomach, and death from swallowing a copper coin, 885.
 Diet and regimen, Dr. Wilkinson's observations on, 799.
 Digitalis, Dr. Munk on the uses of, in diseases of the heart, 257.
 Diseases of the lungs from mechanical causes, Dr. H. M. Hughes on, and Dr. Calvert Holland's account of them, 214, 281.
 Duvernay, M. on the urinary culculi of reptiles, 207.
 Durlacher's, Mr. treatise on corns and bunions, critical notice of, 717.
 Dyspepsia, Dr. Wigan on a form of, 139.

E.

Earle, Mr. J. W. on the distinction between science and practice, 78; on the import of the nervous system in secretion and in irritability, 269, 404, 512.
 Eczema, Mr. B. Phillips on a case of, treated by arsenic and warm water, 721.
 Echinococcus hominis, Mr. Erasmus Wilson on the classification, structure, and development of the, 268.
 EDITORIAL ARTICLES:—
 Our new volume, 26; the commencing medical session, 27.
 The medical profession bill, 53, 91, 201, 232, 291, 388.
 The laudation of the Society of Apothecaries by country practitioners, 55.
 The educational proposals of the Council of the Royal College of Surgeons, 121.
 A manifesto by the Medical and Surgical Association of the borough of Marylebone, 162.
 The resolutions of the Royal College of Physicians, and report of the Royal College of Surgeons of Edinburgh, on the medical bill, 201.
 The dilemma, and remedy the first, 230.
 Address of the Society of Apothecaries, 258.
 Dissimilar views of the proposed medical bill taken by metropolitan and provincial practitioners, 291.
 The dilemma, and remedy the second—association of the general practitioners into a distinct college, incorporated by act of parliament, having an elective council, a court of examiners, and power to frame bye-laws, and to examine and license all future general practitioners, 326.
 The meeting of general practitioners in medicine and surgery of the city of Westminster, 356.

The dilemma, and remedy the third—the practitioner of medicine licensed by a government board, independent of universities. Royal Colleges of Physicians and Surgeons, and Apothecaries' Halls, 385.
 The duties of the state in reference to the practitioner of medicine, 420.
 Advantages of a well constituted council of health and education, 456.
 How is quackery to be remedied? 492.
 Incorporation of general practitioners, 521; schools for the sons of medical men, 523.
 Rumoured changes relative to the College of Surgeons, 551.
 The remedies proposed, 588.
 Means of protection, 614.
 General legislation necessary, 632.
 The question of medicine stamps, 681.
 The new bill, 717.
 The faculty of physicians and surgeons of Glasgow, 738.
 The improper administration of medicines, 777.
 Death from starvation, 803.
 Retrospective effect of the registration clauses, 638.
 Registration of future practitioners, 903.
 On the proposed changes in the profession, 950.
 English and Scotch graduates under the new bill, 968.
 Educational proposals of the council of the Royal College of Physicians and Surgeons, editorial remarks on the, 121.
 Election of fellows of the Royal College of Surgeons, remarks on, by "Veritas," 620.
 Elliot, Dr. on medicine stamps and quackery, 794.
 Empalement, case of, without visceral injury, 846.
 Encephaloid disease of the tibia, Dr. Edwin Hall's case of, 729.
 Enterotomy, lumbar, M. Amussat's case of, without opening the peritonæum, performed with success upon a woman aged 53, 269.
 Epilepsy, Dr. Blackmore's cases of, with remarks on its treatment, 723.
 Ergot of rye, poisoning by bread containing, 877.
 Erysipelas, phlegmonous, Mr. Stafford on two cases of, from wounds poisoned by copper, 829.
 Ethics, medical, 359.
 Evans's, Mr. case of obstruction of the large intestine, 934.
 Evidence, medical, in Belancy's case, Dr. Lethby on the, 213.
 Evolution and delivery, with presentation of the arm and shoulder, Dr. Sussewind's case of, 398.
 Examinations at the University of London and Apothecaries' Hall, 942.

Extirpation of diseased ovaria, Dr. McDowell's cases of, 744.

Eye-ball, Dr. Porter's case of temporary protrusion of the, with loss of vision, from rheumatic inflammation following scarlatina, 704.

F.

Faculty of physicians and surgeons of Glasgow, editorial observations on the proposal to associate it with the university of that city, 738.

Faculty of Glasgow, on the proposal to extinguish this corporation, 780.

Fallot, M. on the action of the heart, 270.

Farrington General Dispensary, Dr. W. Camps, and Dr. W. H. Brown, elected physicians to the, 752.

Fat, the, of animals not an element of respiration, by Dr. George Kemp, 541.

Fearnside's, Mr. H. reports of cases treated in University College Hospital:—Cough of twelve months' duration, and failure of the health during that period, 177; hysteria and spinal irritation, 337; gradual failure of the health for a considerable period, and existence of various symptoms indicating derangement of the cerebral circulation, 529.

Femur, Mr. Lyon on fractures of the, 340.

Fergusson's, Mr. observations on cleft palate, 329.

Fernie, Mr. note from, offering supplies of vaccine lymph, 302.

Fistula in ano, Mr. Lomas on the treatment of, by ligature, 766.

Flourens, M. on the formation of bone, 63.

Fourcault, M. on the functions of the skin, 462.

Frampton, Dr. Algernon, on a very ready and easy manner of ascertaining the specific gravity of urine, 591.

Fungus, case of, from the synovial capsule of the knee, treated by compression, 463.

Fungi, Dr. Lankester on some abnormal forms of, 874.

Furnivall, Dr. on the diagnosis, prevention, and treatment, of diseases of the heart, reviewed, 897.

Furst, Dr. Edward, on the effects of fusel-oil upon the animal economy, 430.

G.

Galen's principal anatomical work, discovery of the nine missing books of, 329.

Gall-bladder, Dr. Somerville Scott Alison on a case of ossification of the, 135.

Galvanic apparatus, best form for a, 592.

Gay, Mr. note from, 96.

General practitioners, probability of their obtaining a charter of incorporation, 383.

General practitioners, remarks on the project for the incorporation of, by "Chirurgus," 519; editorial remarks on, 521.

General practitioners, editorial observations on the means for the protection of, 614; the point discussed as to whether they should be included in the charter of the Royal College of Surgeons, or form a separate incorporation, 652.

Gerdy's, M. case of fungus from the synovial capsule of the knee, treated by compression, 463.

Gintrae's, Professor, case of hypertrophy of the cartilaginous structure of the trachea and bronchi, 32.

Glottis, Mr. Stanhope Illingworth's case of oedema of the, 731.

Goolden, Dr. R. H. on the use of sulphate of manganese in various diseases, 646.

Goodsir's, Messrs. John and D. S. anatomical and pathological observations, reviewed, 736.

Gordon, Dr. Theodore, biographical sketch of, 911.

Gout, Mr. Alexander Ure's researches on, 183.

Graefenberg, or a true report of the water-cure, by H. H. Graham, M.D. 199.

Greatrex, Edward, and Mr. Robinson's case of aneurism of the popliteal artery, 554.

Gregory, Dr. George, on the variolous epidemic of 1844, 617.

Gregory, Professor, on the presence of phosphate of magnesia in bone, and on a new method of procuring phosphoric acid from bone, 390.

Gregory's, Dr. William, outlines of chemistry, reviewed, 678.

Greenhow, Mr. T. M. note from, respecting the case of Miss Martineau, 335.

Greenhow's, Mr. T. M. medical report of the case of Miss H—M—, critical notice of the, 438.

Gulliver, Mr. on the formation of the buffy coat of the blood, 687.

Guy's Hospital, Mr. Hilton elected lecturer on anatomy and physiology at, 304.

Guy's Hospital reports, No. 4, analysis of the, 256, 454.

Guy's, Dr. W. A. principles of forensic medicine, reviewed, 227.

Guy's, Dr. W. A. defence against the charge of plagiarism in his work on forensic medicine, 298.

H.

Hastings, Mr. and Dr. Storks', case of tuberculous excavation of the left lung, treated by perforation of the cavity through the walls of the chest, 378.

- Health, Mr. Fearnside on a case of gradual failure of the, for a considerable period, and existence of various symptoms indicating derangement of the cerebral circulation, 529.
- Health and education, advantages of a well-constituted council of, 456.
- Head, case of injury to the, 271.
- Heart, Dr. Somerville Scott Alison on a case of hypertrophy of the, 135.
- Heart, M. Fallot on the action of the, 270.
- Headache, Mr. T. Wilkinson King on the seat of, and its import in diagnosis, 412.
- Heberden, the late Dr. memoir of, 972.
- Helmuth's, Dr. case of retroversion of the womb in the unimpregnated state, 717.
- Hepatalgia, Dr. Allnatt on, 796.
- Hernia, strangulated, case of, for which an operation was performed by Mr. B. Phillips, 722.
- Hewett, Mr. Prescott, on extravasation of blood into the cavity of the arachnoid membrane, 684.
- Hilton, Mr. John, elected lecturer on anatomy and physiology at Guy's Hospital, 304.
- Hip, Mr. Arnott's clinical lecture on a case of disease of the, 403.
- Hocken, Dr. on a case of immense accumulation of hardened feces in the rectum, and complete suppression of the alvine evacuations for a month, 530.
- Hocken's, Dr. practical remarks on the value of the operation of perforating the wall of the chest into a tubercular cavity for the relief or cure of tubercular phthisis, 431.
- Hoffmann, Dr. the combination of alum and opium recommended by, in cases of lead colic, 207.
- Homicide by an unqualified practitioner, 656.
- Home, Dr. of Edinburgh, notice of the death of, 368.
- Hooping-cough, Mr. Streeter on the nature and seat of, 195.
- Hôtel Dieu, surgery of the, 367; remarks on, by "Chirurgus Britannicus," 458.
- Hufeland, Professor, on the relations of the physician, 543, 580.
- Hughes, Dr. H. M. on diseases of the lungs from mechanical causes, and Dr. Calvert Holland's account of them, 214, 281.
- Hunter, Dr. William, Dr. Robert Lee's discourse on the life and labours of, 1.
- Hunt's, Dr. observations on the relaxed rectum, 332.
- Hydatid tumor of the liver, Dr. Somerville Scott Alison's case of, 18.
- Hydrocele, case of, of the hernial sac, cured by external treatment, 61.
- Hydrocele, Mr. Burton's case of, 974.
- Hydrocephalus, Dr. Edward Blackmore on the treatment of, 699.
- Hydrocyanic acid, Dr. Allnatt on ergotization of the tipulidæ by, 675.
- Hydrocyanic acid, Mr. Pooley's case of poisoning by, 859.
- Hygiene, contributions to, with particular reference to the soldier, 104, 108.
- Hymen, imperforate, Dr. Rebfield on a case of, 461.
- Hypertrophy of the cartilaginous structure of the trachea and bronchi, 32.
- Hysteria, and "spinal irritation," Mr. Fearnside's report of a case of, 337, 373.

I.

- Ideal physiology, a specimen of:—Carrus's earth-life, 33.
- Imperforate anus, curious malformation connected with, 733.
- Illingworth's, Mr. Stanhope, case of œdema of the glottis, 731.
- Incorporation of general practitioners, remarks on, by Medicus, 428.
- Incorporation of general practitioners, remarks on the project of, by Chirurgus, 519; editorial remarks on, 521.
- Incorporation of general practitioners, remarks on the, and the Medical bill, by Medicus, 233.
- Insanity, case of sudden access of, 878.
- Iodide of potassium, Mr. Tatum's three cases of hard circumscribed tumors disappearing under the use of, 591.
- Irregular practitioners, danger of, to the public, 129.
- Is the medical profession over- or understocked? 620.

J.

- Jaw, the lower, Dr. Chisholm's case of excision of nearly one half of the, 46.
- Jeaffreson, Dr. S. J. on the pathology and treatment of ovarian diseases, 44, 80, 112.

K.

- Kaemtz's complete course of meteorology, review of, 355.
- Kemp, Dr. George, on the functions of the bile, 76; on the theory of respiration, 319; paper by, shewing that the fat of animals is not an element of respiration, 541.
- Key's, Mr. Aston, case of aneurism of the right sub-clavian artery, 334.
- King, Mr. T. W. on the capillary circulation of the face and head, 62, 232.
- Kingdom, Mr. on a case of rupture of the liver, 879.

- Kneejoints, Mr. Stanley on a case of extreme contraction and immobility of the, 99.
- Köhler's, Dr. case of laceration of the rectus femoris muscle, 303.
- Krafft's, Dr. case of poisoning by arsenic, treated with hydrated oxide of iron, 750.
- Krieger, Dr. on the course of medical study in Sweden, 206.
- L.
- Labour, case of, complicated with recto-vaginal hernia, 926.
- Lambrecht, Dr. on a case of necrosis of the scapula, 240; case of ovarian dropsy discharging itself by the umbilicus, 303.
- Lancker, Dr. Edwin, on some abnormal forms of fungi, 874.
- Larynx and trachea, Mr. Stanley on the treatment of transverse divisions of the, 97.
- Lassaigne's, M. observations on the composition of a new species of calculus found in the kidneys and the ureters of a bitch, 622.
- Lead colic, the combination of alum and opium recommended by Dr. Hoffman in cases of, 207.
- Lecluyse, Dr. on a case of singular deformity of the womb inducing arm presentation of the child in three consecutive labours, 847.
- Le Conte, Dr. John, on the extraordinary effects of a stroke of lightning, 782.
- Lee's, Dr. Robert, discourse on the life and labours of Dr. William Hunter, delivered at the opening of the session, 1844-5, in the theatre of St. George's Hospital, 1; on the structure of the corpus luteum as a test of early pregnancy, 150; correction of some misstatements respecting the placenta, menstruation, and the corpus luteum, 847.
- Lee, Mr. Edwin, note from, and protest against the omission of his name from the List of Fellows of the Royal College of Surgeons, 175; notice of the medical organization, studies, &c. in Italy, 348, 437, 574.
- Lee's, Mr. account of a case of encysted empyema of twelve years' standing, 890.
- Lefevre's, Sir George, apology for the nerves, reviewed, 290.
- Letheby, Dr. on a case of poisoning with oxalic acid, 49; on the medical evidence in Belaney's case, 218; on a case of poisoning by opium, 247; on the poisonous effects of the cyanides, 603, 676; on the late case of poisoning by prussic acid, 972.
- Limosis avens, small stomach, Dr. Somerville Scott Alison on a case of, 135.
- Linsem's, Dr. case of amnesia complicating acute rheumatism, 304.
- Lion, Dr. on a curious case of paralysis, 208; on a case of poisoning with mortar or quicklime, 64; on a case of melancholia puerperalis attonita, 303.
- Lithotomy, Dr. A. Arnott's description of an operation for, performed by a native hakeem, 621.
- Liver, Dr. Somerville Scott Alison's case of hydatid tumor of the, 18.
- Liver, Dr. Paterson's case of inflammation of the, 538.
- Lock-jaw, with tumor of the jaw, cases treated by Mr. Benjamin Phillips, 433.
- Lomas, Mr. on the treatment of fistula in ano, by ligature, 766.
- London hospital report:—case of hydrocele of the hernial sac, cured by external treatment, 61; case of varicocele treated by compression, ib.
- London Medical Directory, notice respecting the publication of the, 388.
- London Medical Directory for 1845, critical notice of the, 802.
- Lumbricus, discharge of a, from the male urethra, 912.
- Lungs, Dr. H. M. Hughes on diseases of the, from mechanical causes, and Dr. Calvert Holland's account of them, 214.
- Luxation of iliac bone upon the sacrum, two cases of, 814.
- Lyon, Mr. W. on fractures of the femur, 340, 337, 373.
- M.
- Macdonnell, Mr. on a peculiar form of dissecting aneurism of the thoracic aorta, 768.
- Macpherson, Mr. John, on tumors of cicatrices, 346.
- Macilwain's, Mr. address on the occasion of the anniversary meeting of the Royal Medical and Chirurgical Society, 744.
- Malformation of the genital organs, case of, 943.
- Marx's, Dr. Acesius, a survey of the ethical relations of medicine, 14, 51, 87, 102, 113, 184.
- Martineau's, Miss, letters on mesmerism, notice of, by "Veritas," 426.
- Marylebone Manifesto, remarks on the, by "An Old Admirer," 238.
- Mayo's, Dr. record of cases:—complication of thoracic with cerebral congestion, 17; on bleeding in cases of congestion, 146; chronic cases, treated with partial or entire success, in which morbid changes of the cerebral or spinal system have existed, or have been threatened, 332; cough, with occasional hæmoptysis, 485; scarlatina, 923.
- Meade's, Mr. R. H. clinical observations on surgery, 895.

- Medical reform bill, letters from correspondents on the subject of the:—From "An Old Practitioner," 29; resolutions relative to the, adopted by the Royal College of Physicians of Edinburgh, 166; report by the Royal College of Surgeons of Edinburgh, 167.
- Medical organization, studies, &c. in Italy, Mr. Edwin Lee's account of the, 348, 437, 574.
- Medical profession, remarks on the numerical relation of, to the population of Great Britain, 620.
- Medical testimony, on the value of, 683.
- Medical Missionary Society of Edinburgh, 805.
- Medicine stamps, editorial remarks on the question of, 681.
- Medicines, editorial observations on the improper administration of, 777.
- Medico-Chirurgical Transactions, Vol. xix. New Series, analysis of, 325.
- Medical session, the commencing, editorial observations on the prospect of the, with advice to students, 27.
- Medical study in Sweden, Dr. Krieger on the course of, 206.
- Medical journalists, hints to, 740.
- Medical bill, the new, editorial observations on, 717.
- Medical ethics: death of the Rev. Dr. Arnold, 62.
- Medical ethics, 359.
- Medical Guide and Almanack for 1845, critical notice of the, 588.
- Medical reform, remarks on, by Mediator, 939.
- Medicine stamps and quackery, Dr. Elliott on, 794.
- Meeting of general practitioners in medicine and surgery, of the city of Westminster, editorial observations on the, 357.
- Meigs, Professor, on a case of labour complicated with recto-vaginal hernia, 926.
- Melancholia puerperalis attonitis, Dr. Lion's case of, 303.
- Mesmerism, remarks on, by "Veritas," with reference more particularly to the case of Miss Martineau, 426; Mr. Cotton on, 427; a letter on, by one of the Hospital Surgeons, ib.
- Mesmerism applied to surgical operations, Mr. Chatto on, 354.
- Mesmerism applied to surgical operations objectionable, remarks by "Medicus," 525.
- Mesmerism, an the application of, to surgical operations, by "A Constant Reader," 557.
- Mesmerism, Mr. Chatto on the employment of, during surgical operations, 603.
- Microscopical Society, papers read at the:—Mr. Alfred Smece on vessels in fat smaller than the capillaries, 874; Dr. Lankester on some abnormal forms of fungi, with remarks on their inorophlogy, ib.
- Midwifery, malapraxis in, 937.
- Midwifery, observations on the practice of, having been considered as a cause for precluding its practitioners from the honours of the College of Surgeons, 655.
- Milk abscess, prevention of, 879.
- Miller's, Mr. James, principles of surgery, reviewed, 89.
- Military surgery, Sir George Ballingall's outlines of, reviewed, 547.
- Miling, Dr. on a case of death from internal hæmorrhage after a violent effort, 207.
- Moore's, Mr. prize essay on the structure of the lungs, reviewed, 803.
- Mortality, Mr. Clay on the influence of burial clubs on, 209.
- Mortality of the metropolis, tables exhibiting the, 32, 64, 96, 272, 304, 336, 368, 400, 432, 464, 528, 560, 592, 624, 656, 688, 720, 756, 816, 848, 880, 912.
- Mortimer's, Mr. observations on the growth of children's teeth, reviewed, 927.
- Movement in the profession, respecting the new medical bill, proceedings of the various meetings throughout the country: at Rochester, 29; memorial of the medical profession at Liverpool, 58; meeting of medical men at Devonport and Stonehouse, 59; of the Gloucestershire Medical and Surgical Association, ib.; proceedings at a meeting of the Council of the British Medical Association, 60; meeting at Salisbury, 94; at Bristol, ib.; Dr. Symonds' address on the occasion, ib.; meeting at Kensington, 95; at Wrexham, 96; at Bradford, 124; at Chester, ib.; at Shrewsbury, 125; at Colchester, ib.; at Dover, 164; at York, ib.; at Gravesend, 165; at Newcastle, ib.; report of the Council of the Glasgow Medical Association on the bill, 234; meeting of the profession at York, 235; of Chichester, 236; of Bath, ib.; of Northampton, 262; of Maidstone, 263; of Blackburn, 296; of Warrington, ib.; of the Taunton and Somerset branch of the Medical and Surgical Association, 361; meeting at the Hanover Square Rooms, 362; at Sunderland, 387; protest of the practitioners of Surrey, 458; at Cambridge, 525; at Aylesbury, ib.; meeting of the Faculty of Physicians and Surgeons of Glasgow, 353; of the medical profession of Ulverston and Lonsdale, ib.; petition from the county of Hertford, 554; protest from East Kent, ib.; meeting at Gloucestershire, 854; proceedings of the Association of General Practitioners in Medicine, Surgery, and Midwifery, ib.; meeting of members of the college practising in Hampshire, 682; meeting at York, 848; protests from Manchester and Salford, 848; memorial of the Woolwich practitioners, 874; meeting of the Birmingham and Midland Districts Medical and Surgical Association, 875.

- Mülder, Dr. on the chemistry of vegetable and animal physiology, reviewed, 774.
Munk, Dr. on the action of digitalis, and its uses in diseases of the heart, 257.

N.

- Naphtha in phthisis, remarks on the employment of, by "An Old Practitioner," 543.
Nerves, Mr. J. W. Earle on the influence of the, on secretion, 404, 512.
Nervous system, Mr. J. W. Earle on the import of the, in secretion and in irritability, 278.
Nervous system, Dr. Edward Blackmore's observations upon the more important diseases of the, with illustrative cases, 557, 569, 630, 671, 699, 723, 760, 789, 822, 855, 917, 954.
Neuroses, Dr. Pidduck on the periodicity of, 556.
Nevins, Mr. on the best method of finding the specific gravity of powders, 226.
Newnham, Mr. on human magnetism, reviewed, 777.
Norblad's, Mr. E. W. account of the post-mortem examination of Sarah Hart, alleged to have been poisoned at Salt Hill, 518.

O.

- Oath taken by members of the Royal College of surgeons, 941.
Oedema of the glottis, Mr. Henry Stanhope Illingworth's case of, 731.
Ophthalmitis, phlegmonous and phlebitic, Dr. Mackenzie's notes of a lecture on, 593.
Opium a hazardous remedy in strangulated hernia, 781.
Opium, Dr. Letheby on a case of poisoning by, 247.
Orthopedic institution, note from the Secretary of the, 334.
Our new volume, remarks on the commencement of, 26.
Ova, the periodical maturation and extrusion of, independently of coitus, in mammalia and man, proved to be the primary condition to their propagation, Mr. Henry Smith's translation of Bischoff's paper on, 443, 503, 694, 951.
Ovaria, diseased, Dr. Ephraim McDowell's cases of extirpation of, 744.
Ovarian dropsy, Dr. Lambrecht's case of, discharging itself by the umbilicus, 303.
Ovarian diseases, Dr. S. J. Jeaffreson on the pathology and treatment of, 44, 80, 102.

- Oxalic acid, Dr. Letheby's case of poisoning by, 49.
Oxalate of lime, Dr. Golding Bird's notice of the discovery of the, in the urine of herbivora, 49.

P.

- Paterson's, Dr. case of inflammation of the liver, 538; on the structure of the corpus luteum, 640.
Paterson's, Mr. remarks on a case of uterine hæmorrhage, 47; on the early application of the child to the breast, 811.
Paracentesis thoracis, Dr. Thorston's successful case of, 431.
Paralysis, curious case of, related by Dr. Lion, 208.
Peacock, Dr. on a case in which the vena cava inferior was obstructed from the commencement of the common iliac arteries, 267.
Pectoral disease, Dr. T. Ogier Ward's case of, 148.
Pericarditis, Dr. Somerville Scott Alison on, a complication and sequela of scarlatina, with cases and observations, 864.
Pericarditis, Dr. Alison on the occurrence of, in scarlet fever, 728.
Peschel's, Mr. elements of physic, reviewed, 737.
Phillips, Mr. Benjamin, case of lock-jaw treated by, 433.
Phthisis, tubercular, Dr. Hocken's practical remarks on the value of the operation of perforating the wall of the chest for the relief or cure of, 481.
Phthisis, remarks on the employment of naphtha in, by "An Old Practitioner," 543.
Phthisis in Cetacea, 879.
Physicians, registered, on the right of, to practise in London under the new bill, 750.
Physical Society of Guy's Hospital, proceedings of the:—The President's address, *ib.*; Mr. Wilkinson King on the capillary circulation of the face and head, *ib.*; Mr. Cole on a case in which a foreign body was impacted in the throat, 127; Mr. Streeter on the nature and seat of whooping-cough, 205; Dr. Barlow on the depuration of the blood, 259; Mr. Key's case of aneurism of the right subclavian artery, 334.
Physician, Professor Hufeland on the relations of the, 543, 580.
Pidduck, Dr. on the periodicity of neuroses, 556.
Points of practice, by Dr. A. L. Wigan, 224.
Poisoning, Dr. Letheby's case of, with oxalic acid, 49.

Poisoning with mortar or quicklime, 64.
 Poisoning with radix sambuci, 96.
 Poisoning, alleged case of, at Salt Hill, Mr. E. W. Nordblad's account of the post-mortem examination of the body, 518.
 Poisoning by arsenic, Dr. Kraft's case of, treated with hydrated oxide of iron, 750.
 Poisoning by bread containing ergot of rye, 877.
 Poisoning by carbonate of lead, Mr. John Snow's case of, 248.
 Poisoning by sulphuric acid, case of, 876.
 Poisoning, case of, by prussic acid, communicated by Mr. Hicks and Mr. Waterworth, 893.
 Polar expedition, the new: the Admiralty's treatment of their medical officers, 583.
 Polypus of the bladder, Dr. Thienemann's case of ligature of the, 175.
 Pooley's, Mr. case of poisoning by hydrocyanic acid, 859.
 Poor, Dr. Somerville Scott Alison on the state of the, in Scotland, 310.
 Porter's, Dr. case of temporary protrusion of the eyeball, with loss of vision, from rheumatic inflammation following scarlatina, 704.
 Porter, Mr. on the treatment of district medical officers by Boards of Guardians, 734.
 Powders, Mr. Nevins on the best method of finding the specific gravity of, 226.
 Practitioners of medicine, editorial observations on the duties of the state in reference to, 426.
 Pregnancy, Dr. Lee on the value of the corpus luteum as a test of, 150.
 Prisons, Dr. W. Baly on the mortality in, and the diseases most frequently fatal to prisoners, 740.
 Prussic acid, case of poisoning by, communicated by Mr. Hicks and Mr. Waterworth, 893.
 Purpura hæmorrhagica, Mr. Henry Smith on the treatment of, 559.
 Pus-cells, Mr. Addison on the transformation of, into a mucous or fibrous tissue, 70, 250.

Q.

Quackery, remarks on the suppression of, 264.
 Quackery, prime obstacle to the suppression of, 387, 424; the remedy for, considered, 492.
 Quack medicines, advertisements of, 296.
 Quain's, Dr. anatomy of the arteries of the human body, reviewed, 586.
 Quarantine, remarks on, as applied to the prevention of the plague, by M. Aubert Roche, 879.

Quicklime, case of poisoning by, 64.
 Quiescence by adhesion, 751.

R.

Radix sambuci, case of poisoning by, 96.
 Radford's, Mr. lecture on the application of galvanism to the treatment of hæmorrhage, 490.
 Rectus femoris muscle, Dr. Köhler's case of laceration of the, 303.
 Recruiting, statistics of, in the districts of Great Britain and Ireland, during 1844, 550.
 Rees's, Dr. G. O. Gulstonian lectures delivered at the Royal College of Physicians:—on the blood, principally in regard to its physical and pathological attributes, 753, 826, 849.
 Registration clauses, editorial observations on the retrospective effect of the, 868.
 Registration under Sir James Graham's new bill, correspondence between Mr. Craddock and the Home Office, 813.
 Rehfeld, Dr. on a case of imperforate hymen, 462.
 Relaxed rectum, Dr. Hunt on the, 332.
 Respiration, Dr. George Kemp on the theory of, 319.
 Resolutions of the College of Physicians, and report of the Royal College of Surgeons of Edinburgh on the Medical Bill, editorial observations on the, 201.
 Retroversion of the womb, Dr. Helmuth's case of, in the unimpregnated state, 747.
 Re-vaccinations, results of the, performed in the Prussian Army in the year 1843, 461.
 Rigg's, Mr. experiments on the formation or secretion of carbon on animals, the disappearance of hydrogen and oxygen, and the generation of heat during the process, 220.
 Roberts, Dr. on a case of ulceration of the duodenum, 266.
 Royle, Dr. on the importance of the study of chemistry, 780.
 Royal Medical and Chirurgical Society, papers read at the:—
 Mr. Roberts on a case of ulceration of the duodenum, 266.
 Dr. Peacock on a case in which the vena cava inferior was obstructed from the commencement of the common iliac veins, 267.
 Mr. Erasmus Wilson on the classification, structure, and development of the echinococcus hominis, 268.
 Dr. Hocken on a case of immense accumulation of indurated feces in the rectum, with complete suppression of the alvine evacuations for a month, 330.
 Dr. Hunt's observations on the relaxed rectum, 332.

- Mr. Fergusson's observations on cleft palate, and on staphylography, 389.
- Messrs. Greatrex and Russell's case of aneurism of the popliteal artery cured by compression of the femoral artery, 554.
- Dr. Pidduck on the periodicity of neurones, 556.
- Mr. Tatum's three cases of hard circumscribed tumors in muscle, disappearing under the influence of iodide of potassium, 591.
- Dr. Gregory on the variolous epidemic of 1844, 617.
- Mr. Prescott Hewett on extravasation of blood into the cavity of the arachnoid membrane, 684.
- Mr. Gulliver on the formation of the buffy coat of the blood, 687.
- Dr. Baly on the mortality in prisons, and the diseases most frequently fatal to prisoners, 740.
- Notice of Mr. Macilwain's address at the anniversary meeting, 744.
- List of the officers for 1845-6, ib.
- Mr. Stanley on the pulsatory tumors of bone, 806.
- The President's address, 808.
- Mr. Rainey on the minute structure of the lungs, and the formation of pulmonary tubercle, 871.
- Dr. Davy on the colostrum of the cow, 933.
- Mr. Evans's case of obstruction of the large intestine, 934.
- Royal College of Surgeons of England, gentlemen admitted members of the, 32, 64, 176, 208, 272, 368, 464, 592, 656, 688, 734, 880, 912, 944, 976.
- Royal College of Surgeons of England, list of members admitted to the Fellowship on the 24th of December, after passing the required examination, 560.
- Royal College of Surgeons, reply of the, to the National Association of practitioners in medicine, surgery, and midwifery, 905.
- Royal College of Surgeons of Edinburgh, the rumour of an intention to dispose of the museum contradicted, 425, 495.
- Royal College of Physicians, proposed charter of the, statement regarding the licentiates *extra urbem*, 909.
- Royal Society, last soirée of the, for the season, 910.
- Rumoured changes relative to the College of Surgeons, editorial observations on the, 551.
- Rupture of the liver, Mr. Kingdom on a case of, 879.
- S.
- Sages-femmes in Paris, regulations respecting, 877.
- Saunders, Mr. on the treatment of tooth-ache, 975.
- Spleen, case of rupture of the, 943.
- Stafford, Mr. R. A. on tetanus, or locked-jaw, and its treatment, 945.
- St. Marylebone Infirmary, Mr. Stafford's report of surgical cases treated in the, 638.
- St. Marylebone Infirmary, decision of the Guardians with respect to the vacant surgeoncy, 425.
- St. Marylebone Infirmary, remarks by "Philistrus" on the propriety of the determination to discontinue gratuitous medical services, 528; further remarks, by "Philojustitia," 558.
- Salerno, account of a visit to, 31.
- Sanatorium, the, mesmerism not sanctioned nor practised by any of the medical gentlemen connected with the institution, 425.
- Scarlet-fever, Dr. Alison on the occurrence of pericarditis in cases of, 728.
- Scapula, Dr. Lambrecht's case of necrosis of the, 240.
- Schoenlein's, Dr. clinical lectures, review of, 866.
- Schollmeyer's, Dr. case of poisoning by radix sambuci, 96.
- Schools for the sons of medical men, editorial observations on the proposal for the establishment of, 523.
- Science and practice, Mr. J. W. Earle on the distinction between, 78.
- Secretion, Mr. J. W. Earle on the influence of the nerves on, 404, 512.
- Serous membranes, Dr. Willis on the import and office of the, 767.
- Sewers, cess-pools, &c. M. Siret's disinfectant for, 176.
- Shoulder-joint, Mr. Collier's case of accident to the, 925.
- Skin, M. Fourcault on the functions of the, 462.
- Small-pox, susceptibility to, after vaccination, 461.
- Small-pox, malignant or hæmorrhagic, Dr. John Snow's case of, 586.
- Smee's, Mr. case of copper-coloured syphilitic eruption affecting the conjunctiva, 347.
- Smee, Mr. Alfred, on vessels in fat smaller than the capillaries, 874.
- Smith's, Mr. Henry, translator of a memoir by Professor Bischoff, on the periodical maturation and extrusion of ova, independently of coitus, proving it to be the primary condition to their propagation, 443, 506, 694, 961.
- Smith's, Mr. William, case of abscess in the abdominal muscles, and diseased pubic bones, 517.
- Smith, Mr. Henry, on the treatment of purpura hæmorrhagica, 559.
- Snow's, Mr. John, case of acute poisoning by carbonate of lead, 248.
- Snow's, Dr. case of malignant or hæmorrhagic small-pox, 586.

- Snow, Dr. John, on pericarditis after scarlet fever, 728.
- Society and the Doctors, 559.
- Society of Apothecaries, laudation of the, by country practitioners, 55.
- Society of Apothecaries, editorial observations on the address of the Society of, 834.
- Society for the relief of widows and orphans of medical men, changes of the officers for the, 128.
- Society for the relief of widows and orphans of medical men, half-yearly meeting of the, 205.
- Solly, Mr. on the protective apparatus of the brain and spinal cord in man and animals, 936.
- Solly's, Mr. contributions to the pathology of the brain, 245; on diseases of the spine, 625, 689.
- Soulby, Mr. George, on the importance of duly qualified chemists and druggists to the profession, 128.
- Stanley's, Mr. clinical lectures delivered at St. Bartholomew's Hospital:—
Treatment of transverse divisions of the larynx and trachea, 97.
Subcutaneous division of tendons, 98.
Talipes equinus in both limbs of an adult, from rigidity and shortening of each tendo-achilles, gradually arising without obvious cause, division of the tendons, 98.
- Extreme contraction and immobility of the knee-joints, limited motion of the ankle-joints, consequent on paraplegia—division of the ham-strings, and tendo-achilles in each limb, 99.
- Compound dislocation of the last joint of the thumb, of the obstacle to its reduction, 100.
- Subcutaneous encysted tumor, containing the acephalocyst hydatid, echinococcus, 101.
- Diagnosis of fracture, 273.
- Adjustment of fractures, 274.
- Fractured ends of the bone impacted together the obstacle to adjustment, 275.
- Fracture of a bone in two places the obstacle to adjustment, 275.
- Displacement of a tendon or muscle the obstacle to adjustment, 275.
- End of the bone impacted in the substance of an adjacent muscle the obstacle to adjustment, 275.
- Inordinate action of the muscles on one side of the limb, consequent on the laceration of those on the opposite side, their antagonists, displacing the fractured bone, and constituting an insuperable obstacle to its adjustment, 275.
- Treatment of fractures which are slow of union, 276.
- Influence of the action of the muscles around the slowly uniting fracture, 276
- Influence of pressure upon the ununited fracture, 276.
- On the use of the immoveable apparatus, 277.
- Stanley, Mr. on the pulsatory tumors of bone, 809; his address at the anniversary meeting, 808.
- Stafford's, Mr. R. A. report of surgical cases treated by him in the St. Marylebone Infirmary, 638, 827; on tetanus, 935.
- Starvation, editorial observations on a case of death from, 803.
- Sternum, case of congenital deficiency of the, 208.
- Strauss's, Mr. remarks and comments on the medical and chemical evidence adduced at the trial of John Tawell, critical notice of, 360.
- Strangulated hernia, opium a hazardous remedy in, 781.
- Streeter, Mr. on the nature and seat of whooping-cough, 195.
- Sweden, Dr. Krieger on the course of medical study in, 206.
- Sulphate of manganese, Dr. R. H. Gool ten on the employment of, in various diseases, 646.
- Sussewend's, Dr. case of evolution and delivery, with presentation of the arm and shoulder, 398.
- Subjects for dissection, dearth of, 236.
- Suffert, Dr. on a case of anaurosis occurring suddenly, 240.
- Sulphuric acid, poisoning by, 878.
- Sulphate of quinine, researches upon the poisonous effects of, by M. Desiderio, 878.
- Superfecundation (?) in a sow, 464.
- Surgery, Mr. R. H. Meade's clinical observations on, 958.
- Surgical operations, remarks on a proposed application of mesmerism to, 557.
- Surgery of the Hôtel Dieu, 367; remarks on the, by "Chirurgus Britannicus," 459.
- Sydenham Society, hints to the, 126.
- Synnot's, Dr. case of sudden blindness, 160.
- Syphilitic eruption, case of copper coloured, affecting the conjunctiva, 347.
- Syphilis, Mr. Thomas Bartlett on, particularly the treatment of the primary sore, 73.

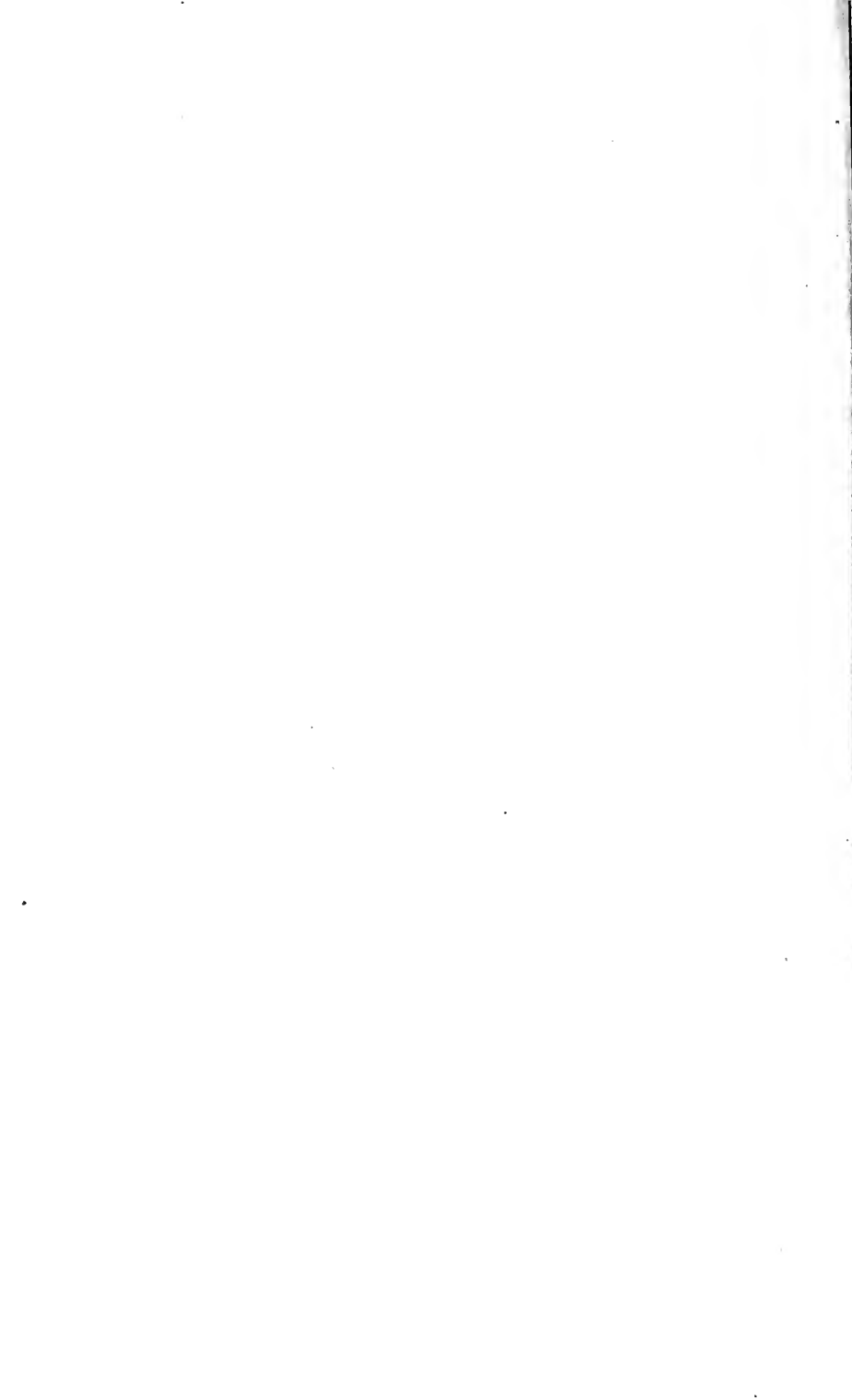
T.

- Talipes equinus in both limbs of an adult, Mr. Stanley on a case of, 98.
- Tamplin's, Mr. lectures on the nature and treatment of deformities.—See "Deformities, Mr. Tamplin's lectures on the nature and treatment of."
- Tatum's, Mr. three cases of hard circumscribed tumors in muscle disappearing under the influence of iodide of potassium 591.

- Taylor, Mr. Alfred, on a case in which death followed an over dose of opium administered to a child, 256; note from, respecting a review of Dr. Guy's principles of forensic medicine, 335; on the numerical relation of the medical profession to the population of Great Britain, 497; thermometrical table, on the scales of Fahrenheit, Centigrade, and Reaumur, 587.
- Tendons, Mr. Stanley on the subcutaneous division of, 98.
- Tetanus, Mr. Stafford on a case of, the symptoms of which resembled hydrophobia, 827.
- Tetanus, or locked-jaw, and its treatment, Mr. R. A. Stafford on, 945.
- Therapeutical inquiry, Dr. James Arnott on the present state of, 407, 474, 481.
- Thermometer, a moral and physical, 52.
- Thermometer, state of the, during January 1845, 624; during Feb. 752.
- Thermometrical registers, defects of, 781.
- Thienemann's, Mr. case of ligature of a polypus of the bladder, 175.
- Thigh-bone, luxation of the head, and fracture of the neck of the, 367.
- Thompson, Mr. on a singular case of fatal intra-uterine hæmorrhage, 289.
- Thorston's, Dr. successful case of paracentesis thoracis, 431.
- Thornton, Dr. on the use of creasote in nævus maternus, 176.
- Thumb, Mr. Stanley on a case of compound dislocation of the, 100.
- Tibia, Dr. Edwin Hall's case of encephaloid disease of the, 729.
- Tierney's, Sir J. Matthew, observations on variola vaccina, reviewed, 868.
- Tipulidæ, Dr. Allnatt on ergotization of the, by hydrocyanic acid, 675.
- Topography, medical, of the Bights of Benin and Biafra, Mr. W. F. Daniell's observations on the, 435, 515, 582, 643, 706, 771, 886.
- Transactions of the College of Physicians at Philadelphia, summary of the, 747.
- Tuberculous excavation of the left lung, treated by perforation of the cavity through the walls of the chest, 378.
- Tumour, subcutaneous encysted, containing the acephalocyst hydatid, echinococcus, Mr. Stanley on a case of, 101.
- Tumors of cicatrices, Mr. Macpherson on, 346.
- University College, second examination for the degree of A.M., 272.
- University of London, examiners appointed in the room of Professor Daniell, 912.
- University of St. Andrew's, 623.
- University of London, list of gentlemen who have passed the examination for doctor of medicine, 431; for bachelor of medicine, 432.
- Ure's, Mr. Alexander, researches on gout, 188; record of cases treated at the Westminster General Dispensary, 785.
- Uric acid excreted by butterflies, 623.
- Urine, Dr. Frampton on a very easy and ready manner of ascertaining the specific gravity of, 591.
- Urinary calculi of reptiles, M. Duvernoy on, 207.
- Urinary deposits, Dr. Golding Bird's work on, reviewed, 419.
- Uterine hæmorrhage, Mr. Paterson's remarks on a case of, 47.
- Uterine hæmorrhage, Mr. Thompson on a singular case of, proving fatal, 289.
- V.
- Vaccine lymph, note from Mr T. P. Fernie, 302.
- Vaccination, susceptibility to small-pox after, 460.
- Valerianate of zinc, cases in which it may be advantageously employed, 623.
- Variocoele, case of, treated by compression, 61.
- Ventilation, insufficient, of the Royal Medical and Chirurgical Society, complaints respecting the, 329.
- Visit to Salerno, account of a, 31.
- W.
- Wagner's, Dr. elements of the comparative anatomy of the vertebrate animals, reviewed, 649.
- Ward's, Dr. T. Ogier, case of pectoral disease, 143.
- Water, Dr. Wilkinson on the medical agency of, at different temperatures, 770.
- Westminster General Dispensary, Mr. Alexander Ure's record of cases treated at the, 785.
- Westminster Hospital, cases treated by Mr. Benjamin Phillips in, 433, 721.
- Wigan, Dr. A. L. on a form of dyspepsia, 139; on points of practice—offensive breath, 224.
- Wilczewski, Dr. on the terchloride of gold as an outward application in rheumatic gouty affections, 751.
- Wilkinson, Dr. on the medical agency of water at different temperatures, 770.
- U.
- University College, second examination for the degree of A.M., 272.
- University of London, examiners appointed in the room of Professor Daniell, 912.

- Willis, Dr. on the import and office of the serous membranes, 767.
- Wilson, Mr. Erasmus, on the classification, structure, and development of the echinococcus hominis, 268.
- Wilkinson's, Dr. observations on diet and regimen, 799.
- Wells's, Dr. essay upon cretinism and goitre, reviewed, 868.
- Wöhler, Professor, remarkable case of poisoning with arsenic related by, 655.
- Womb, Dr. Helmuth's case of retroversion of the, in the unimpregnated state, 747.
- Woolwich practitioners, memorial of the, 875.
- Wounds of blood-vessels, M. Amussat's researches on the, 496.
- Womb, singular deformity of the, inducing arm presentation of the child in three consecutive labours, 847.
- Wounding, notice of a trial for, 937.

END OF VOL. XXXV.





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